KANOMAX
The Ultimate Measurements

2015
Spring
General Catalog

Ultimate Measurement Instruments

HVAC Testing

Indoor Air Quality

Industrial Hygiene

Cleanroom Contamination Control

Industrial Flow Testing

Aerosol Research

Fluid Mechanics Research

Anemometers / Indoor Air Quality Monitors / Gas Monitors / Dust Monitors / Sound Meters / Vibration Meters / Particle Counters
Cleanroom Monitoring System / Aerosol Research Instruments / Mass Spectrometer / Automotive Testing Instruments / Fluid Mechanics Research Instruments

www.kanomax-usa.com

Kanomax Group

Since our inception 60 years ago, Kanomax has been the most promising manufacturer of a broad range of precision measuring instruments for fluid mechanics research, environmental, aerosol research, particle measurement, and customized system applications. As a company that prides itself in technology, product quality, and service, we have been enjoying an unsurpassed reputation in the industrial and academic fields.

Global Network

Our direct subsidiaries and Kanomax's affiliates and well-trained distributors worldwide are there to provide the most efficient support and service for you. Our global network is always listening to the voice of customers, like you, in order to keep providing the best measurement solutions possible.

- **Kanomax Holdings Inc. (New York, NY)**
- **Kanomax Corporation (Osaka, Japan)**
- **Kanomax Instrument Shenyang Inc. (China)**
- **Shenyang Kano Scientific Instrument Co., Ltd (China)**
- **Kanomax USA Inc. (Andover, NJ)**
- **Kanomax Japan Inc. (Osaka-Tokyo-Nagoya, Japan)**
- **MSI. TOKYO (Tokyo, Japan)**

ISO Certification

Kanomax is an ISO 9001/ISO14001 certified company. Kanomax management and production procedures adhere to these international quality standards.

JOA 2790 JOA-EM 1628

Kanomax Provides Outstanding Solutions

Environmental Measurements

- HVAC Testing
- Indoor Air Quality
- Industrial Testing

Aerosol/Particle Measurements

- Cleanroom Contamination Control
- Aerosol Research

Fluid Measurements

- Fluid Mechanics

Calibration facility ensures accuracy and repeatability

Kanomax fully understands service is an essential part of the total solution provided to our valued customers. Having already established a worldwide service network, we continuously strive to improve our support services.

For reliable measurements it is recommended that all instruments be calibrated on an annual basis. This ensures ongoing credibility and accuracy. Our calibration laboratory in New Jersey maintains the most accurate wind tunnel of its kind. Kanomax provides the highest quality of service available with a quick turnaround time. Our service specialists are well trained and will calibrate your instruments to the highest standards.

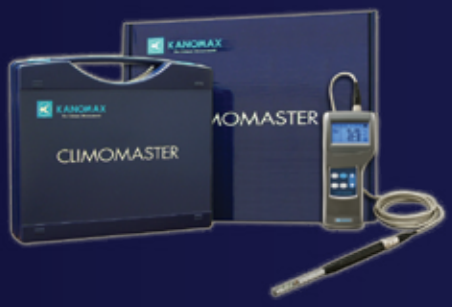
Our lab certifies Kanomax product to NIST standards.

High Velocity Wind Tunnel

Open Jet Wind Tunnel

Particle Generator

Featured Products



Handheld Anemometer

Capture Hood

1CFM Flow Rate
Portable Particle Counter

Portable Aerosol Mobility Spectrometer (PAMS)

Gasmaster Handheld Gas Monitor

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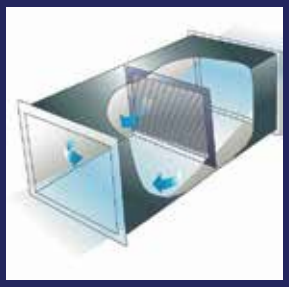
The Ultimate Measurements

Applications

HVAC testing and balancing



Testing airflow rate of ventilation

Handheld Anemometers

Specifications

Model	
Sensor Type	
Air Velocity Ranges	
	ft./min
	m/s
	Resolution
	Accuracy
Air Flow	CFM (ft^3/min)
Temperature Ranges	
	Accuracy
Relative Humidity Ranges	
	Accuracy
Differential Pressure Ranges	
	Accuracy
Dimensions	
	Main Unit
	Probe
Weight	

Anemomaster™ Lite

Palm-size and feather-weight standard hot-wire Anemometer

- Compact and lightweight
- Easy replacement of probe without recalibration
- Data Hold function
- Includes probe with 59 in (150 cm) cable, extension rod, 4 pcs. AA batteries, carrying case, and NIST Certificate

Anemomaster™ Professional & Standard

Telescopic, articulating probe is designed for HVAC testing and balancing applications

- Simultaneous display of temperature and airflow or air velocity
- Telescopic, articulating probe
- Data HOLD function, record and recall MAX/MIN/AVG
- Store up to 1,500 measurements
- Data processing software allows real-time measuring and downloading data to PC
- Complete with telescopic probe with 79 in (200 cm) cable, Data processing software, USB cable, AC adapter, 6 pcs. AA batteries, carrying case, and NIST Certificate

Climomaster™ Series

Multi-function hot-wire Anemometer with detachable compatible probes

- Simultaneously measures and displays air velocity, flow rate, humidity, temperature, and differential pressure
- 6 interchangeable probes are available for various applications
- Smart probe technology: easy probe replacement without recalibration of the main unit
- Data HOLD function, record and recall MAX/MIN/AVG
- Store up to 20,000 measurements
- Data processing software allows real-time measuring and downloading of data to PC
- Includes probe, 79 in (200 cm) probe cable, 6 pcs. AA batteries, carrying case, and NIST Certificate

Anemomaster™ Model 6810 Series

Rotating Vane Anemometer with High Accuracy from 40 to 7800 fpm

- 2 sizes of vane heads are available for users' applications
- Industrial grade enclosure and metal vane probe
- Data HOLD, record and recall MAX/MIN
- Complete with metal vane sensor (choice of 2.75" or 1.00" diameter) with 5 ft long cable, extension rod with handle grip, flexible extension rod, 3 pcs. AA batteries, carrying case, and NIST Certificate

	LITE	Professional & Standard	Climomaster Series	6810 Series
	Hot-wire	Hot-wire	Hot-wire	Rotating Vane
	2 to 3940	2 to 6000	2 to 9480	40 to 7800
	0.01 to 20.0	0.01 to 30.0	0.01 to 50.0	0.2 to 40
	0.01 m/s	0.01 m/s	0.01 m/s	0.01 m/s
	+/- 5% of reading or 0.015 m/s whichever is greater	+/- 3% of reading or 0.015 m/s whichever is greater	+/- 2% of reading or 0.015 m/s whichever is greater	+/- 1% of reading
	n/a	0 to 2,709,360	0 to 2,709,360	0 to 9,999
	-4 to 158°F (-20 to 70°C)	-4 to 158°F (-20 to 70°C)	-4 to 158°F (-20 to 70°C)	-4 to 212°F (-20 to 100°C)
	+/- 1°F (0.5°C)	+/- 1°F (0.5°C)	+/- 1°F (0.5°C)	+/- 0.5°F (0.3°C)
	n/a	n/a	0.2 to 98.0% RH	0.5 to 95.0% RH
	n/a	n/a	+/- 2% of reading	+/- 2% of reading
	n/a	+/- 5.00 kPa *Option	+/- 5.00 kPa *Option	n/a
	n/a	+/- (3% of reading +0.01) kPa	+/- (3% of reading +0.01) kPa	n/a
	W2.4" x H4.7" x D1.2"	W3.4" x H7.4" x D1.6"	W3.4" x H7.4" x D1.6"	W3.3" x H6.3" x D1.5"
	0.24" (6.1 mm) in diameter	0.24" (6.1 mm) in diameter	1.0 to 10 mm in diameter	Vane: 2.75" or 1.00" in diameter
	0.4 lbs (180 g)	0.9 lbs (400 g)	0.9 lbs (400 g)	0.95 lbs (430 g)

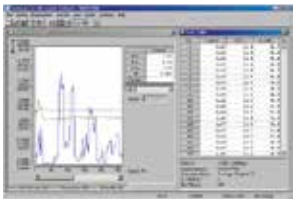
Climomaster™ Model 6501 Series

Multi-function hot-wire anemometer with detachable compatible probes

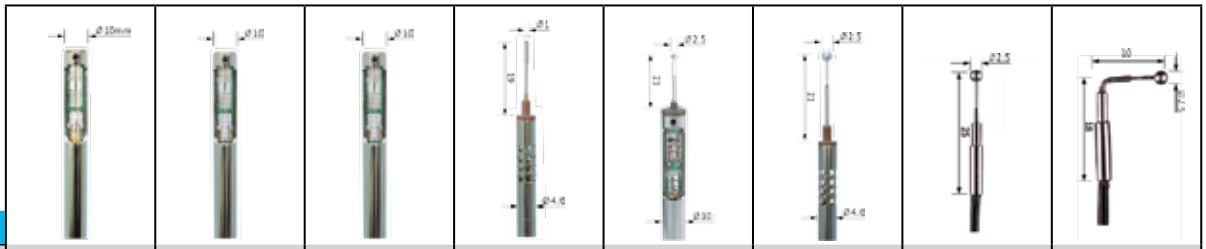
Features:

- Simultaneously measures and displays air velocity, flow rate, humidity, temperature, and differential pressure
- Airflow rate calculation based on registered duct size
- Now equipped with an automatic atmospheric pressure compensation function for precise airflow measurement
- Store up to 20,000 measurements
- 8 interchangeable probes are available for various applications
- Smart probe technology: easy probe replacement without recalibration of the main unit
- Includes probe, 79 in (200cm) probe connection cable, 6 pcs. AA batteries, carrying case, and NIST Certificate

Main Unit Specifications	
Air Velocity Ranges	2 to 9840 fpm (0.01 to 50.0 m/s) *Varies by probe
Accuracy	+/- 2% of reading or 0.015 m/s whichever is greater
Temperature Ranges	-4 to 158°F (-20 to 70°C)
Accuracy	+/- 1.0°F (0.5°C)
Relative Humidity Ranges	2.0 to 98.0%RH *Varies by probe
Accuracy	+/- 2.0%RH
Differential Pressure Ranges (Option)	+/- 5.00 kPa
Accuracy	+/- (3% of reading + 0.01) kPa
Interface	USB / RS232C (for print-out)
Datalogging	Up to 20,000 records
Analog Output (Option)	0 to 1 V
Power Supply	6 x AA Batteries or AC Adapter
Dimensions	W3.4" x H7.4" x D1.6" (88 x 188 x 41 mm)
Weight	0.9 lbs (400 g)



Optional data processing software allows real-time measuring and downloading data to your PC



Probe Specifications								
Model	6531-2G	6541-2G	6561-2G	6542-2G	6533-2G	6543-2G	6551-2G	6552-2G
Probe Type	Uni-Directional	Uni-Directional	Uni-Directional	Omni-Directional	Omni-Directional	Omni-Directional	Mini-Spherical	Mini-Spherical
Air Velocity	2 to 6000 fpm	2 to 6000 fpm	2 to 9840 fpm	2 to 6000 fpm	2 to 1000 fpm	2 to 1000 fpm	2 to 6000 fpm	2 to 6000 fpm
Temperature	-4 to 158°F	-4 to 158°F	-4 to 158°F	-4 to 158°F	-4 to 158°F	-4 to 158°F	n/a	n/a
Relative Humidity	2.0 to 98.0 %RH	n/a	n/a	n/a	2.0 to 98.0 %RH	n/a	n/a	n/a

Accessories

6501-CE	Main Unit with Analog Output & Pressure Sensor
6531-04:	Telescopic Extension Rod (Flex-Neck)
6531-05:	Telescopic Extension Rod (Straight)
6531-06:	2m Probe Cable (also available in 5, 10, 20m)
6000-41:	Data Processing Software (for Windows)
6000-31:	Printer Cable for DPU-S245
6000-61:	Hands Free Case
6113-02:	AC Adapter
DPU-S245:	Portable Thermal Printer
TP-202L:	Rolled Printer Paper (10 rolls)

6531-04

6531-05

6000-61

Anemomaster™ Professional & Standard

Multi-function hot-wire Anemometer with telescopic, articulating probe

Telescopic probe is designed for HVAC testing and balancing applications

Features:

- Simultaneous display of temperature and airflow or air velocity
- Telescopic probe measures are velocity and temperature in air ducts, vents, and small openings
- Data HOLD function, Record and recall MAX/MIN/AVG
- Store up to 1,500 measurements (Professional only)
- Data processing software allows real-time measuring and downloading data to your PC (professional only)
- Includes telescopic probe with 79 in (200 cm) cable, Data processing software (Professional only), USB cable (Professional only), AC adapter, 6 pcs. AA batteries, carrying case and NIST Certificate

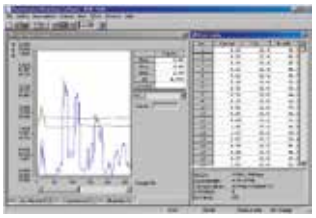
Applications:

- HVAC Testing
- Facility Maintenace
- Critical Environment Certification
- IAQ Investigation

Specifications

Model	Anemomaster™ Professional Model 6036	Anemomaster™ Standard Model 6035*
Probe Type	Telescopic and Articulating tip	Telescopic
Air Velocity Ranges	2 to 6000 fpm (0.01 to 30.0 m/s)	
Accuracy	+/- 3% of reading or 0.015 m/s whichever is greater	
Temperature Ranges	-4 to 158°F (-20 to 70°C)	
Accuracy	+/- 1.0°F (0.5°)	
Differential Pressure Ranges	+/- 5.00 kPa *Option	n/a
Accuracy	+/- 3% of reading +0.01 kPa	n/a
Interface - Digital	USB / (RS232C for print-out)	(RS232C for print-out)
Datalogging	Up to 1500 records	None
Power Supply	6 x AA batteris or AC Adapter	
Dimensions	W3.4" x H7.4" x D1.6"	
Weight	0.9 lbs (400 g)	

*Model 6035 Anemomaster Standard is available by special order only, please call for details



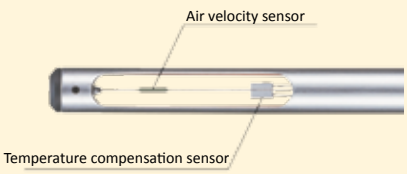
Windows 7 compatible software included
(professional only)

Accessories

6036-BE: Professional with Pressure Sensor
6000-31: Printer Cable for DPU-S245
6000-61: Hands Free Case
DPU-S245: Portable Thermal Printer
TP-202L: Rolled Printer Paper (10 rolls)

Theory of thermal (hot-wire) type Anemomaster™

The air velocity sensor is heated and temperature elevated (relative to the surrounding air) by means of control electronics. The temperature compensation sensor senses the ambient, or surrounding air temperature, and forces the velocity sensor to stay at a constant overheat above the ambient. The circuit forces the voltage to be equal by means of an operational amplifier. Air flowing past the sensor tends to cool the sensor, thus driving down its resistance. The amplifier responds by immediately delivering more power to the circuit to maintain voltage equilibrium. Delivered power is converted into electrical signals to display.



Anemomaster™ LITE

Palm-size and feather-weight standard hot-wire Anemometer

Features:

- Compact and lightweight
- Display switchable in m/s or ft/min (FPM) for air velocity and °F and °C for air temperature
- Easy replacement of probe without recalibration
- Average measurements over 1 or 5 seconds for air velocity
- Data Hold function
- 4 pcs. AA batteries, extension rod, carrying case and NIST Certificate

Specifications

Model	6006
Air Velocity Ranges	2 to 3940 fpm (0.01 to 20.0 m/s)
Accuracy	+/- 5% of reading or 0.015 m/s whichever is greater
Temperature Ranges	-4 to 158°F (-20 to 70°C)
Accuracy	+/- 1.0°F (0.5°C)
Power Supply	4 x AA Batteries or AC Adapter
Dimensions	W2.4" x H7.4" x D1.2"
Weight	0.4 lbs (180 g)

Accessories

6006-2G: Replacement Probe
6112-03: Spare Extension Rod
6006-02: Spare Hard Carrying Case

Anemomaster™ Model 6113/6114

High velocity (up to 50 m/s) multi-function hot-wire Anemometer

Features:

- Simultaneous measurements of air velocity, air temperature and differential pressure
- Large, easy to read LCD display
- Durable body
- Model 6113 includes built-in printer
- Complete with probe with 79 in (200 cm) cable, extension rod, shoulder strap, and 6 pcs. C cell batteries, and NIST Certificate

Specifications

Model	6113	6114
Air Velocity Ranges	20 to 9840 fpm (0.10 to 50.0 m/s)	
Accuracy	+/- 3% of reading +0.1 m/s	
Temperature Ranges	32 to 212°F (0 to 100°C)	
Accuracy	+/- 2.0°F (1.0°C)	
Differential Pressure Ranges	+/- 5.00 kPa *Option	
Accuracy	+/- 3% of reading +0.01 kPa	
Interface	RS232C	
Datalogging	100 measurements	
Analog Output	0 to 1 V *Option	
Built-in Printer	○	–
Power Supply	6 x C cell Batteries	
Dimensions	W7.9" x H5.9" x D3.9"	
Weight	2.2 lbs (1 kg)	

Accessories

6113-01: Spare Probe
6113-02: AC Adapter
6113-03: Extension Rod
6113-04: Shoulder Strap
6113-07: Pressure Sensor
6113-08: Analog Output
6000-41: Data Processing Software
6000-02: Communication Cable to PC
TP-202L: Rolled Printer Paper (10 rolls)

Anemomaster™ Vane Model 6810 Series

Rotating Vane Digital Anemometer

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Features:

- High Accuracy from 40 to 7800 feet per minute
- 2 sizes of vane heads are available for users' applications
- Industrial grade enclosure and metal vane probe
- Large display with backlight
- Data HOLD, Record and recall MAX/MIN
- Includes metal vane sensor (choice of 2.75" or 1.00" diameter) with 5 ft long cable, extension rod with handle grip, flexible extension rod, 3 pcs. AA batteries, carrying case, and NIST-traceable calibration certificate

1 inch Air Velocity Probe

6815 comes with HTP202

Specifications	6812		6813		6815	
Model						
Air Velocity Ranges	2.75" Head	1.00" Head	2.75" Head	1.00" Head	2.75" Head	1.00" Head
ft/min	40 to 7800	300 to 6800	40 to 7800	300 to 6800	40 to 7800	300 to 6800
m/s	0.20 to 40.0	1.5 to 35.0	0.20 to 40.0	1.5 to 35.0	0.20 to 40.0	1.5 to 35.0
Resolution	1 FPM or 0.01 m/s		1 FPM or 0.01 m/s		1 FPM or 0.01 m/s	
Air Flow CFM (ft3/min)	0 to 9999		n/a		n/a	
Temperature Ranges	n/a		-4 to 212°F (-20 to 100°C)		-4 to 176°F (-20 to 80°C) *with HTP202	
Accuracy	n/a		+/- (0.3°C +0.2% of reading in °C)		+/- (0.3°C +0.2% of reading in °C)	
Relative Humidity Ranges	n/a		n/a		5.0 to 95.0% RH	
Accuracy	n/a		n/a		+/- 2.0% RH	
Power Supply	3 x AA Batteries		3 x AA Batteries		3 x AA Batteries	
Main Unit Dimensions	W3.2" x H6.5" x D1.5"		W3.2" x H6.5" x D1.5"		W3.2" x H6.5" x D1.5"	
Weight	0.95 lbs (430 g)		0.95 lbs (430 g)		1.1 lbs (500 g)	

Air Velocity Probes

Model	AP275	APT275	AP100	APT100
Air Velocity	2.75" Head		1.00" Head	
ft/min	40 to 7800		300 to 6890	
m/s	0.20 to 40.0		1.5 to 35.0	
Accuracy	+/- (1.0% reading + 1 digit)		+/- 0.50% FS + 0.75% reading + 1 digit	
Temperature				
°F	n/a	-4 to 212	n/a	-4 to 212
°C	n/a	-20 to 100	n/a	-20 to 100
Accuracy	n/a	+/- (0.3°C +0.2% of reading in °C)	n/a	+/- (0.3°C +0.2% of reading in °C)

Humidity & Temp. Probe

Model	HTP202
Relative Humidity	
Range	5.0 to 95.0% RH
Resolution	0.1% RH
Accuracy	+/- 2.0% RH
Temperature	
°F	-4 to 176
°C	-20 to 80
Accuracy	+/- (0.3°C +0.2% of reading in °C)

Vane Air Velocity Transmitters

Features:

- Transmitters specially designed for monitoring the Indoor Air Quality in the air conditioning, heating, and ventilation industries.
- Three versions available:
  AT400: *Air Velocity Transmitter*
  TAT420: *Air Velocity & Temperature Transmitter*
  THT500: *Temperature-Humidity Transmitter*
- Three separate power supplies 110 VAC 50/60 Hz, 220 VAC 50/60 Hz, and 10-30 VDC
- Three concurrent outputs for each measurement: 0-1 VDC, 0-5 VDC, and 4-20 mA DC
- Temperature Range -4 to 212°F (-20 to 100°C)

TABmaster™ Capture Hood

A solution for airflow testing and balancing

The new Kanomax TABmaster™ is the perfect tool for accurate supply and return airflow measurements. Interchangeable hoods make it easy to sample the air for any duct size. The unit is lightweight and easy to handle. The full color screen can be tilted so it's always at the optimal viewing angle regardless of height.

Features:

- 23 to 2500 cfm (40 to 4250 m3/h) range
- Simultaneously measures and displays air flow, temperature and humidity
- Displays the direction of the airflow
- Store up to 8,000 measurements
- Advanced storage feature allows you to store multiple measurements under a single ID#
- Built-in back pressure compensation ensures accuracy for large volumetric flow measurements
- Removable handheld micromanometer with Bluetooth® wireless capability (Model 6715)
- Includes: standard hood, carrying case, AA batteries, PC communication cable, data processing software, user manual, and calibration certificate

Applications:

- HVAC testing, adjusting and balancing
- Air volumetric flow measurements through registers, diffusers and grilles
- Direct readout at supply and return airflow
- Air velocity measurement in the duct
- Check filter fouling by measuring differential pressure

Specifications

Model	6710	6715
Airflow Range	23 to 2500 CFM (40 to 4250 m3/h)	
Accuracy	+/- 3% of reading +/- 10 m3/h	
Resolution	1m3/h	
Air Velocity Range	n/a	0.15 to 40 m/s (Pitot), 0.15 to 15 m/s (Velocity Matrix)
Accuracy	n/a	±3% of readings ±0.05m/s
Resolution	n/a	0.1 m/s (>10.0m/s) 0.01m/s (<9.99m/s)
Temperature Range	32 to 122°F (0 to 50°C)	
Accuracy	+/- 1.0°F (0.5°C)	
Resolution	0.1°C	
Humidity Range	0 to 100% RH	
Accuracy	+/- 3.0% RH	
Resolution	0.1% RH	
Interface	USB	USB, Bluetooth®
Datalogging	Up to 3000 measurements	Up to 8000 measurements
Power Supply	AA batteries or AC adapter	
Hood Dimensions	2x2 ft (610x610 mm), 1x4 ft (305x1220 mm), 2x4 ft (610 x 1220 mm) 3x2 ft (915 x 610 mm), 3x3 ft (915x915 mm), 500x500mm	
Weight	7.9 lbs (3.6 kg)	

Portable stand extends up to 6.5' from top to base

The Bluetooth® feature can send data to any Android-based device

Accessories

6710-01: Spare Hood 2x2 ft (610x610mm)
6710-02: Spare Hood 2x4 ft (610x1220mm)
6710-03: Spare Hood 1x4 ft (305x1220mm)
6710-04: Spare Hood 3x2 ft (915x610mm)
6710-05: Spare Hood 3x3 ft (915x915mm)
6710-06: Spare Hood 500x500mm
6710-07: Spare Hood Support Poles
6710-08: Capture Hood Stand

Micromanometer

Smart micrometer for TAB professionals

Handheld micromanometer with Bluetooth® wireless capability takes airflow and pressure readings with a pitot tube or the optional velocity matrix. The matrix is a cross shaped grid, similar to the one in the base of the capture hood, that makes it possible to take face velocity readings and average velocity readings at multiple points simultaneously. The Bluetooth® feature can send data to your smartphone or any Android-based device.

Pitot tubes and Velocity Matrix are available from Kanomax

Specifications

Model	6700
Air Velocity Ranges	0.15 to 40 m/s (with Pitot tube) 0.15 to 15 m/s (with Velocity Matrix)
Accuracy	±3% of readings ±0.05m/s
Pressure Ranges	-2500 to 2500 Pa
Accuracy	±1.5% of reading ±0.25 Pa
Temperature Ranges	0 to 50°C
Accuracy	+/- 1% of reading +1°C
Relative Humidity Ranges	0 to 100%RH
Accuracy	±3%RH (10~90%RH)
Interface	USB, Bluetooth®
Datalogging	8000 measurements
Power Supply	4 x AA Batteries or AC Adapter

Pitot Tube

Stainless Steel Construction Pitot Tubes

The unique ellipsoidal nose form results in exceptional accuracy, insensitivity to errors in alignment and elimination of the need for calibration curves. Constructed from stainless steel, tubes can be as small as 2.3 mm in diameter yet scaled up to 4 m in length.

Features:

- Totally compatible with manometers, pressure gauges and pressure transmitters
- Ideal for measurement of air velocity in hostile environments
- Integral thermocouple for combined pressure and temperature sensing
- Can be used in permanent position when fitted with gland
- S-Type for limited access and adverse conditions

Thermo pitot tube

S-Type pitot tube

Specifications

Easy Fit Ellipsoidal Pitot Tube

Overall Length (m)	0.2	0.3	0.3	0.5	0.5	0.75	0.75	1.0	1.0	1.25	1.25
Tube Diameter (mm)	4	4	4	8	8	8	8	8	8	9.5	9.5
Head Diameter (mm)	2.3	4	4	8	8	8	8	8	8	9.5	9.5
Gland (inch)			1/4"		3/8"		3/8"		3/8"		1/2"

Classic Ellipsoidal Pitot Tube

Overall Length (m)	1.83	2.13	2.44	2.74	1.0	1.22	1.52	1.83
Tube Diameter (mm)	12.7	19	19	19	8	9.5	9.5	12.7
Head Diameter (mm)	9.5	9.5	9.5	9.5	8	9.5	9.5	9.5
Gland (inch)					3/8"	1/2"	1/2"	1/2"

Pitot with K-Type Thermocouple

Overall Length (m)	0.3	1.0
Tube Diameter (mm)	4	8
Head Diameter (mm)	4	8

S-Type Pitot Tube

Overall Length (m)	0.7	1.2	2.2	3.2

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The Ultimate Measurements

Flow Grids

For Accurate In-Duct Volume Flow Measurements

Kanomax flow grids produce averaged total and sub-static pressures signals to generate an enhanced velocity pressure signal, outside the duct wall, that directly relates to the volume flow, providing accurate and reliable outputs where other flow measuring devices are found to be unsatisfactory. Works directly with Micro-manometers, pressure transducers, Magnahelic gauges, and pressure activated alarm switches. These are ideal for ventilation monitoring for LEEDS and many other facility management monitoring applications.

Features:

- Sizes from 4.0" (100mm) diameter to 10 ft.(3.0 meters) square
- Uncertainty of flow measurement is within +/- 1.0%
- High temperature systems up to 850°C are available
- Stainless steel grade 321 tube supplied as standard, other grades of steel or alloys are available upon request

Standard Sizes

Rectangular Grids		
Type A 6.4mm (1/4") diameter tube	Manifold length (mm)	100 to 450
	Pressure Tube length (mm)	150 to 450
Type B 12.7mm (1/2") diameter tube	Manifold length (mm)	250 to 650
	Pressure Tube length (mm)	350 to 1200
Type C 25.4mm (1") diameter tube	Manifold length (mm)	750 to 1000
	Pressure Tube length (mm)	800 to 2000

Radial Grids		
Type A 6.4mm (1/4") diameter tube	Diameter (mm)	100 to 500
Type B 12.7mm (1/2") diameter tube	Diameter (mm)	500 to 1100
Type C 25.4mm (1") diameter tube	Diameter (mm)	1100 to 2500

Duct Leakage Tester

Test Duct Integrity and HVAC Efficiency

The Duct Leakage Tester from Kanomax will help you find breaches in your duct work. Leaks can be costly as they make your heating and cooling systems run more than they should. In addition to raising your heat and electricity bills over time this extra strain can cause your HVAC system to fail or require excessive maintenance. This portable duct leakage tester can help you find and correct problems, increasing the efficiency of your HVAC systems and helping our building stay greener.

Features:

- Pressurize (or de-pressurize) ducts to test for leakage
- Perfect for energy efficiency testing
- Comes standard with wheeled cart for easy transport

Specifications		
Pressure	In duct static range	+/-3000 Pa
	Resolution	0.1Pa
	Accuracy	1% of reading +/- 1Pa
Volumetric Flow	High leakage range	10 to 220 L/S
	Low leakage range	1 to 13 L/S
	Accuracy	2.5% of reading +/- 0.01L/S
	Resolution	0.01L/S
Barometric Pressure	Range	700 to 1300hPa
	Accuracy	+/-2% of reading
Power Requirement		2200W

Anemomaster™ Model 6162

High Temperature Anemometer

KANOMAX
The Ultimate Measurements

Features:

- Air velocity and temperature measurements in 932°F (500°C) environments
- Record and recall MAX/MIN/AVG, Timing graph display
- Store up to 999 measurements
- RS232C interface, analog output, and remote control terminal equipped
- Includes shoulder strap, AC adapter, 2 pcs. analog output cable, and 6 pcs. C cell batteries

High temperature measuring solution requires Model 6162 with one of the high temperature probes (0203, 0204 or 0205)

- The Model 0203 includes probe with 4.9 ft (1.5 m) cable, 5m probe connection cable, probe case, and NIST Certificate
- The Model 0204 includes probe with 7.6 ft (2.3 m) cable, 10m probe connection cable, probe case, and NIST Certificate
- The Model 0205 includes probe with 7.6 ft (2.3 m) cable, 10m probe connection cable, probe case, and NIST Certificate

Main Unit Specifications

Model	6162
Air Velocity Ranges	Varies by Probe, see below for Probe Specifications
Accuracy	+/- 3% of Full Scale
Temperature Ranges	Varies by Probe, see below for Probe Specifications
Accuracy	+/- 1% of reading +1°C
Interface	RS232C
Datalogging	999 measurements
Analog Output	0 to 1 V
Remote Terminal	START/STOP Key
Power Supply	6 x C cell Batteries or AC Adapter
Dimensions	W8.7" x H3.3" x D5.9"
Weight	4.0 lbs (1.8 kg)

Probe Specifications

Model		0203	0204/0205
Air Velocity Measuring Range	Temp. Range		
	32 to 212°F	40 to 9840 fpm (0.2 to 50.0 m/s)	
	212 to 392°F	80 to 9840 fpm (0.4 to 50.0 m/s)	
	392 to 572°F	n/a	138 to 9840 fpm (0.7 to 50.0 m/s)
	572 to 752°F	n/a	197 to 9840 fpm (1.0 to 50.0 m/s)
Accuracy		+/- 3% Full Scale	
Temperate Measuring Range		32 to 392°F (0 to 200°C)	32 to 932°F (0 to 500°C)
Accuracy		+/- 1% of reading	
Dimensions / Weight		ø 11 x 200 mm (ø 0.4" x 7.8") 0.4 lbs (200 g)	0204: ø 14 x 1000 mm (ø 0.6" x 39.4") 1.1 lbs (500 g)
			0205: ø 14 x 500 mm (ø 0.6" x 19.7") 0.4 lbs (200 g)
Probe Cables		Teflon Coating	
Heat-resistance		392°F (200°C)	
Extension Cable		Vinyl Coating	
Heat-resistance		176°F (80°C)	

Accessories

0203: Probe for Middle Temperature
0204: Probe for High Temperature (Long)
0205: Probe for High Temperature (Short)
6162-03: Extension Rod for 0203
6162-04: Extension Rod for 0204/0205
6162-05: Probe Compression fitting for 0203
6162-06: Probe Compression fitting for 0204/0205
6162-07: Communication Cable to PC
6000-41: Data processing Software
6511-09: Printer Cable for DPU-S245
DPU-S245: Portable Thermal Printer
TP-202L: Rolled Printer paper (10 rolls)

*Optional probe cable lengths up to 40m are available

Probe Dimensions *Length in mm

■ **MODEL 0203**

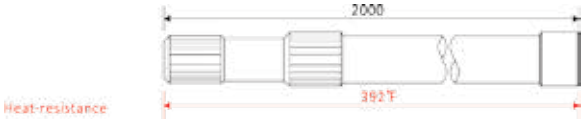
■ **Extension Rod for 0203 * Option**

■ **Entire Length**

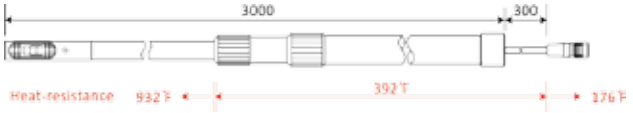
■ **Probe Cable**

■ **MODEL 0204**

■ **Extension Rod for 0204 * Option**



■ **Entire Length**



■ **MODEL 0205**

KANOMAX
The Ultimate Measurements

Multi-Channel Measuring Instruments

Variety of probes for many applications

Main Unit Specifications
Model
Probe Compatible
Air Velocity Ranges
Temperature Ranges
Relative Humidity Ranges
PC Communication
Interface
Analog Output
Power Supply
Dimensions
Weight

Airflow Transducer Model 6332 / 6332D

Compact design Airflow Transducer, fits into small spaces

- 10 interchangeable probes are available for various applications
- Easy probe replacement without recalibration of the main unit
- Selectable output options: 0 to 5 V or 4 to 20 mA

4-Channel Anemomaster™ Model 1570

Compact design 4-channel unit with compatible probes

- 10 interchangeable probes are available for various multi-channel applications
- Simultaneously measurements of 4 channels of air velocity
- Software allows real-time measurements of air velocity and airflow in 4 channels
- The Model 1570 includes data processing software, RS232C cable, power cable, and 2 pcs. fuse

Multi-Channel Anemomaster™ Model 1550 / 1560

Up to 320 points multi-measurements system with a variety of probes

- System can be scaled up with modules and probes
- 3 types of probes are available
- 4 types of modules are available
- The chassis may be cascaded up to 5 units via RS232C
- Multi-channel Anemomaster includes RS232C cable, printer cable, power cable, and 2 pcs. fuse

6332/6332D	1570	1550 / 1560
V Probe	V Probe	V Probe / VT Probe / VTH Probe
20 to 9840 fpm (0.10 to 50.0 m/s)	20 to 9840 fpm (0.10 to 50.0 m/s)	20 to 9840 fpm (0.10 to 50.0 m/s)
n/a	n/a	32 to 212°F (0 to 100°C)
n/a	n/a	5.0 to 95.0% RH
n/a	Data Processing Software	Data Processing Software
n/a	RS232C	RS232C, Centronics, GP-IB
DC 4 to 20mA or DC 0 to 5V	0 to 5 V	0 to 5 V
DC or AC	AC	AC
W3.1” x H5.0” x D1.2”	W10.2” x H2.8” x D7.9”	Model 1550: W19.6” x H5.5” x D16.9” Model 1560: W8.9” x H5.5” x D12.8”
0.7 lbs (320 g)	5.7 lbs (2.6 kg)	Model 1550: 22 lbs (10 kg) Model 1560: 11 lbs (5 kg)

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The Ultimate Measurements

Airflow Transducer Model 6332 / 6332D

Features:

- Smart probe technology: easy probe replacement without recalibration of the main unit
- Selectable output options: 0 to 5 V or 4 to 20 mA

6332D

6332

Main Unit Specifications

Model	6332	6332D
Display	—	○
Air Velocity Ranges	Varies by probe, See below for Probe Specifications	
Accuracy	+/- 3% of reading	
Analog Output	DC 4 to 20mA or DC 0 to 5V	
Power Consumption	Approx. 2.0 W	
Power Supply	DC 12 to 24V or AC 80 to 240V	
Dimensions	W3.1" x H5.0" x D1.2"	
Weight	0.7 lbs (320 g)	

4-Channel Anemomaster™ Model 1570

Features:

- Simultaneous measurements of 4 channels of air velocity; easy to switch over each channel display
- Software allows real-time measurements of air velocity and airflow in 4 channels
- The Model 1570 includes data processing software, RS232C cable, power cable, and 2 pc. fuse

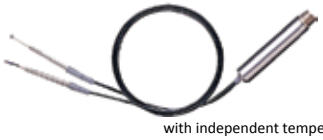
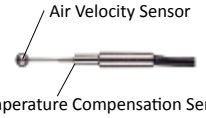
Main Unit Specifications

Model	1570
Air Velocity Ranges	Varies by probe, See below for Probe Specifications
Resolution	0.01 m/s
Interface	RS232C
Analog Output	0 to 5V
Power Supply	AC 85 to 265V
Dimensions	W10.2" x H2.8" x D7.9"
Weight	5.7 lbs (2.6 kg)

Compatible Probes

■ Air Velocity Proves (V Probes)

Probe Specifications			0965-00 is with Horn	0965-09 is 80mm long 0965-10 is 400mm long
Model	**0962-00**	**0963-00**	**0965-00/-01**	**0965-09/10**
Probe Type	Uni-Directional	Uni-Directional	Omni-Directional	Omni-Directional
Air Velocity	20 to 9840 fpm (0.10 to 50.0 m/s)	20 to 9840 fpm (0.10 to 50.0 m/s)	20 to 4920 fpm (0.10 to 25.0 m/s)	20 to 9840 fpm (0.10 to 50.0 m/s)

Probe Specifications	**Miniature Probe** with built-in temperature compensation	 **Miniature Probe** with independent temperature compensation
	 Air Velocity Sensor, Temperature Compensation Sensor	Air Velocity Sensor, Temperature Compensation Sensor
Model	**0965-03**	**0965-04**	**0965-07**	**0965-08**
Probe Type	Omni-Directional	Omni-Directional	Omni-Directional	Omni-Directional
Air Velocity	20 to 4920 fpm (0.10 to 25.0 m/s)	20 to 4920 fpm (0.10 to 25.0 m/s)	20 to 4920 fpm (0.10 to 25.0 m/s)	20 to 4920 fpm (0.10 to 25.0 m/s)

Multi-Channel Anemomaster™ Model 1550/1560

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The Ultimate Measurements

Features:

- The multi-channel Anemomaster is composed of chassis, module, and probe. The Model 1550 (chassis) holds 16 modules and the Model 1560 holds 6 modules
- The chassis may be cascaded up to 5 units (5 units of Model 1550 can hold 320 channels of air velocity sensors)
- 3 types of probes are available
  Air velocity probe (V probe)
  Air velocity / Temperature probe (VT probe)
  And Air Velocity / Temperature / Humidity probe (VTH probe)
- 4 types of modules are available
  4 channel air velocity module
  2 channel air velocity / temperature module
  1 channel air velocity / temperature / humidity module
  Analog output module
- Multi-channel Anemomaster includes RS232C cable, printer cable, power cable, and 2 pcs. fuse

1550

1560

Accessories

1500-01: RS232C for Cascade Connection
1500-02: GP-IB Output
1500-03: Ring Guards for Probe Protection
1504-04: Cable for V module (10m)*
1511-01: Cable for VT Module (10m)*
1512-01: Cable for VTH Module (10m)*
S620-00: Data Processing Software (for Windows)

*Additional cable lengths available

Main Unit Specifications

Model	1550	1560
Air Velocity Ranges	Varies by Probe, See below for Probe Specifications	
Resolution	0.01 m/s	
Temperature Ranges	Varies by Probe, See below for Probe Specifications	
Resolution	0.1°C	
Relative Humidity Ranges	Varies by Probe, See below for Probe Specifications	
Resolution	0.1% RH	
Interface	RS232C for PC Connection	
	RS232C for Cascade *Option	
	Centronics for Printer Output	
	GP-IB *Option	
Analog Output	0 to 5 V *Option with D/A Module	
Power Supply	AC Adapter	
Dimensions	W19.6" x H5.5" x D16.9"	W8.9" x H5.5" x D12.8"
Weight	22 lbs (10 kg)	11 lbs (5 kg)

Air Velocity Temperature Humidity Proves (VT / VTH Probes)

Probe Specifications	0962-21	0963-21	0965-21	0963-31	0965-31
Probe Type	Uni-Directional	Uni-Directional	Omni-Directional	Uni-Directional	Omni-Directional
Air Velocity	20 to 9840 fpm (0.10 to 50.0 m/s)	20 to 9840 fpm (0.10 to 50.0 m/s)	20 to 9840 fpm (0.10 to 50.0 m/s)	20 to 9840 fpm (0.10 to 50.0 m/s)	20 to 9840 fpm (0.10 to 50.0 m/s)
Temperature Ranges	32 to 212°F (0 to 100°C)	32 to 212°F (0 to 100°C)	32 to 212°F (0 to 100°C)	32 to 212°F (0 to 100°C)	32 to 212°F (0 to 100°C)
Relative Humidity Ranges	n/a	n/a	n/a	5.0 to 95.0% RH	5.0 to 95.0% RH

Modules

Specifications	1504 V Module	1511 VT Module	1512 VTH Module	1510 D/A Module
Model				
Module Type	Air Velocity	Air Velocity, Temp.	Air Velocity, Temp., Humidity	Analog Output
# of Channels	4	2	1	1

Model 1560 has 6 slots for modules

KANOMAX
The Ultimate Measurements

Applications

Hospitals and Elderly Care Facilities Monitor

Green building rating system
IEQ performance testing

Indoor Air Quality Investigation

Indoor Air Quality Monitors

Ventilation Testing
Thermal Comfort Control
Occupational Health Control
Monitoring Toxic Gas

Handheld IAQ Monitor Model 2212

Multi-Function Indoor Air Quality Monitor

Features:

- Simultaneous measurements of CO, CO2, Temperature, and Relative humidity
- Calculates Dew point, Wet bulb temperature, Absolute humidity, Humidity Ratio, and % Outside Air
- Store up to 1500 measurements
- Easy user self calibration
- Easy replacement of probe
- PC interface with RS232C or USB and software for real-time measurements and downloading data to your PC
- Complete with probe with 79 in (2m) cable, probe stand, calibration cap & connection tube, data processing software, RS232C cable, USB to serial adapter, 6 pcs. AA batteries, carrying case, and NIST-Traceable calibration certificate

Software Included

Specifications

Model	2212
Carbon Monoxide (CO)	0 to 500 ppm
Accuracy	+/- 3% of reading
Carbon Dioxide (CO2)	0 to 5000 ppm
Accuracy	+/- 3% of reading
Temperature Range	-4 to 140 F (-20 to 60 C)
Accuracy	+/- 1.0°F (0.5°C)
Relative Humidity Range	2.0 to 98.0 %RH
Accuracy	+/- 2% of reading
Interface	RS232C
Datalogging	1500 measurements
Analog Output	0 to 1 V *Option
Power Supply	6 x AA Batteries or AC Adapter
Dimensions	W3.4" x H7.4" x D1.6"
Weight	0.9 lbs (400 g)

Accessories

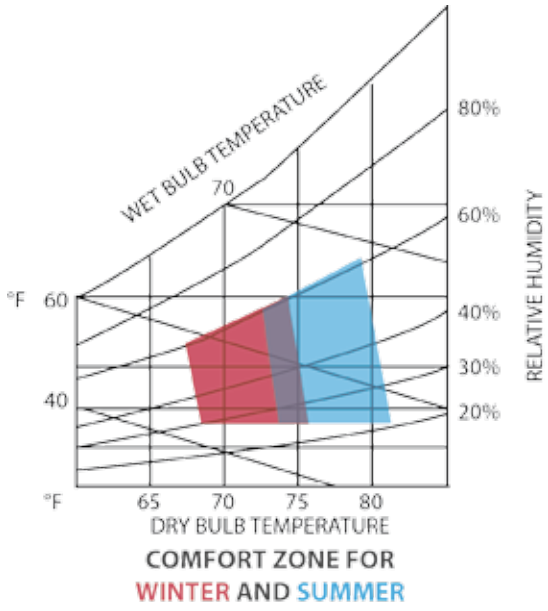
6113-02:	AC Adapter
2211-09:	Analog Output
DPU-S245:	Portable Thermal Printer
6000-03:	Printer Cable for DPU-S245
TP-202L:	Rolled Printer Paper (10 rolls)

Indoor Comfort

Comfort is very subjective and will vary from one individual to the next, but ASHRAE Standard 55 provides guidelines for a "comfort zone" that most people will feel comfortable in. This comfort zone is derived from both temperature and humidity and varies depending on the season. See the chart to the right for details. The 2212 IAQ Monitor from Kanomax can measure both parameters simultaneously indicating if changes are needed to make a building's occupants comfortable.

The monitor can also check CO2 levels and determine the rate of exchange, or the percentage of outside air, being introduced to a building per ASHRAE Standard 62. Controlling the rate of exchange with the HVAC system is critical to ensuring occupant well-being. Too much CO2 build-up can cause lethargy and make it difficult for individuals to concentrate. Too much outside air may also be harmful if it's introducing external pollutants to the environment.

The 2212 is a great tool for IAQ investigation and spot checks to ensure an indoor environment remains within desired levels to maintain occupant health and comfort. The ability to measure all of these parameters in a single instrument simplifies the labor involved and eliminates the need to purchase and learn multiple instruments.



KANOMAX
The Ultimate Measurements

Gasmaster Handheld Gas Monitors

CO, CO2, Ammonia, Ozone, VOC etc. More than 20 gases

Features:

- Simultaneous measurements of gas concentration, temperature, and humidity
- Model 2710 is simple, easy-to-use, low-cost monitor
- Model 2750 has data logging function and USB interface for PC communication
- The gas monitor is fully compatible with all gas sensors
- Multi-gas sensor heads are available for IAQ and Environmental survey applications
- Sensor heads for handheld units are interchangeable without recalibration of main unit

Specifications		
Model	**2710**	**2750**
Measurement Units	ppm or mg/m³	ppm or mg/m³
T/H* Sensor	Available as option	Available as option
On-board alarm	—	◯
Remote Sensor	◯	◯
Datalogging	—	8,188 measurements
Interface	—	USB
Analog Output	—	0 to 5 V
Power supply	Li-ion battery pack or AC adapter	Li-ion battery pack or AC adapter
Dimensions	W7.4" x H4.8" x D2.1"	W7.4" x H4.8" x D2.1"
Weight	1.0 lbs (460 g)	1.0 lbs (460 g)

* Temperature and Humidity

Gas Sensor Heads

Gas Sensor Specifications

Gas Sensor Heads	Range (ppm)	Accuracy	Resolution
Ammonia	0 to 100	<+/-5 ppm + 15%	0.1 ppm
Ammonia	0 to 1000	<+/-0.5 ppm + 10%	1 ppm
Carbon monoxide	0 to 100	<+/-1 ppm (0 to 10 ppm) <+/-10% (10 to 100 ppm)	0.1 ppm
Carbon monoxide	0 to 1000	<+/-2 ppm + 15%	1 ppm
Carbon dioxide	0 to 2000	<+/-10 ppm + 5%	1 ppm
Hydrogen	0 to 5000	<+/-10 ppm + 10%	1 ppm
Hydrogen sulphide	0 to 10	<+/-0.05 ppm (0 to 0.5ppm) <+/-10% (0.5 to 10ppm)	0.01 ppm
Methane	0 to 9999	<+/-20 ppm + 15%	1 ppm
Ozone	0 to 0.150	+/- 0.005 ppm	0.001 ppm
Nitrogen dioxide	0 to 1.0	<+/-0.02 ppm (0 to 0.1ppm) <+/-10% (0.2 to 1ppm)	0.001 ppm
NMHC	0 to 25	<+/-0.1 ppm + 10 %	0.1 ppm
Sulphur dioxide	0 to 10	<+/-0.05 ppm (0 to 0.5ppm) <+/-10% (0.5 to 10ppm)	0.01 ppm
Formaldehyde	0 to 10	<+/-0.05 ppm (0 to 0.5 ppm) <+/-10% (0.5 to 10 ppm)	0.01 ppm
VOC	0 to 25	<+/-0.1 ppm + 10 %	0.1 ppm
VOC	0 to 500	<+/-5 ppm + 10 %	1 ppm
VOC PID	0 to 20	<+/-0.02 ppm + 10 %	0.01 ppm
VOC PID	0 to 1000	<+/-0.2 ppm + 10 %	0.1 ppm

Multi-Gas Sensor Heads	Sensor	Range (ppm)	Accuracy	Resolution
MS1	CO2 CO	0 to 2000 0 to 100	<+/-10 ppm + 5% <+/-1ppm	1 ppm 0.1 ppm
MS2	CO2 CO VOC (PID)	0 to 2000 0 to 100 0 to 25	<+/-10 ppm + 5% <+/-1ppm <+/-0.02 ppm + 10%	1 ppm 0.1 ppm 0.01 ppm

* Other specific concentrations available on request

Compartible for Indoor Air Quality Survey

- Carbon Monoxide (CO)
- Carbon Dioxide (CO2)
- Multi-gas sensior (MS1 and MS2)
- Ozone (O3)
- Sulphur Dioxide (So2)
- Formaldohyde (CH2O)
- Volatile Organic Compounds (VOC)

Compartible for Environmental Survey

- Nitrogen Dioxide (NO2)
- Hydrogen Sulphide (H2S)
- Sulphur Dioxide (So2)
- Carbon Monoxide (CO)
- Carbon Dioxide (CO2)
- Volatile Organic Compounds (VOC)
- Ozone (O3)
- Ammonia (NH3)
- Non Methane Hydrocarbon (NMHC)

Accessories

KMTRH: Temperature/Relative Humidity sensor
KMENC: Protective enclosure
KMR10: Remote sensor kit
KMR36: Replacement Li-ion Battery
KMR40: Carrying Case
KMR42 Calibration kit

Networked Gas Monitoring Systems

Fixed Transmitters & Controllers

Features:

- The gas sensors are able to measure concentrations of Ozone, Volatile Organic Compounds, Ammonia, Carbon Monoxide
- Each sensor head has its own identification (ID), which allows a "Daisy-Chained" network to be created utilizing either a computer system or Programmable Logic Controller (PLC)
- Networks of up to 256 individual monitors/transmitters can be created

Specifications	S905	S935	S945
Model	S905	S935	S945
Measuring Ranges	See Gas Sensor Specifications	See Gas Sensor Specifications	See Gas Sensor Specifications
T/H* Sensor	Option *	Option *	Option *
Alarm Output	○	○	○
Analog Output	4 - 20 mA	4 - 20 mA and 12 to 24 V	4 - 20 mA and 12 to 24 V
Interface	RS485	RS485	RS485
Power Supply	24 VDC	24 VDC	24 VDC
Enclosure Size	2.5" x Ø5.1"	W7.1" X H4.3" X D3.5"	W9.1" X H5.5" X D3.7"
Enclosure Casing	Fibre reiforced plastic	Fibre reiforced polycarbonate	Fibre reiforced polycarbonate
Weight	850 g	850 g	1.1 kg

PLC Specifications	R1000 Series
Model	R1000 Series
Sensor Channels	Up to 12
Digital Alarm Inputs	Up to 10
Alarm & Control Relays	Up to 22
Analog Inputs	Up to 13
Analog & Control Outputs	Up to 6
Expansion I/O	Up to a maximum of 128 I/O
Data-storage	13,000 data points
Communication	Serial: RS232/ RS485 (Selectable) ModBus: Supports MODBUS protocol, Master/Slave
Power Supply	DC 24V
Dimensions	W3.78" x H3.78" x D2.52" (96 x 96 x 64 mm)

Monitors Networked to a computer system

Features:

- Centralized control from the PC or decentralized control from individual monitors
- Specialized application specific software is available on request

Monitors Networked to the R1000 PLC

Features:

- Centralized control from the PLC or decentralized control from individual monitors
- Specialized application specific software is available on request

Handheld Odor Monitor

KANOMAX
The Ultimate Measurements

Highly Sensitive, 3 Models for Various Applications

Handheld Odor Meter is the most popular simplified tool for odor analysis, which indicates the relative strength and odor classification numerically by comparing the odor gas and purified air.

Features:

- Numerical value for relative strength of smell
- Numerical value for classification of smell
- Handheld Odor meter is ideal for Before and After applications, such as air purification and cleaning service.
- Real-time sampling mode displays odor change continuously
- Memory sampling mode saves data based on the selected sampling rate. (up to 32732 data, 511 files)
- Battery operated with 7 hrs continuous usage

Applications:

OMX-SRM

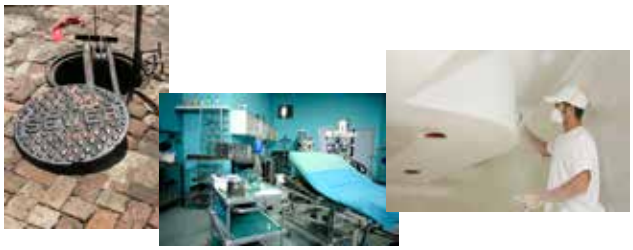
- Finding odor source at factories, incinerator, plants, or effluent treatment facility

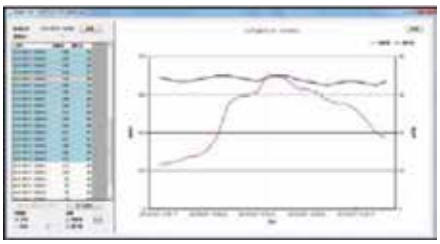
OMX-ADM

- Evaluation for deodorizing at hospitals or nursing homes
- Suitable for putrid odor such as ammonia

OMX-TDM

- TVOC measurement for monitoring IAQ condition





Specifications

Model	OMX-SRM	OMX-ADM	OMX-TDM
Detection Method	Two Semiconductor Gas Sensors		
Sampling Method	Continuous Sampling with Built-in Air Pump		
Object Gas	Ethanol, Acetone, Hydrogen, etc	Hydrogen, Sulfide, Methyl Mercaptan, Ammonia, etc	TVOC (Toluene), etc
Odor Strength Level	0.0 to 999	0 to 999	0.0 to 9999 (µg/m3)
Classification	Class 0 to 90	Odor Intensity 2.5 to 5.0	n/a
Power Supply	4 x AA batteries or AC adaptor *Battery life for continuous measurement is approx. 7 hours		
Memory Capacity	Up to 32732 data		
Storage Temperature	0 to 40°C (32 to 104 ºF) * No condensation		
Operating Temperature	-10 to 50°C (14 to 122 ºF) * No condensation		
Dimensions	74 (W) x 167.5 (L) x 35 (H) mm		
Weight	250g (without batteries)		

Dif-Kit Tracer Gas Hardware

Professional Fume Hood Diagnostic Tools

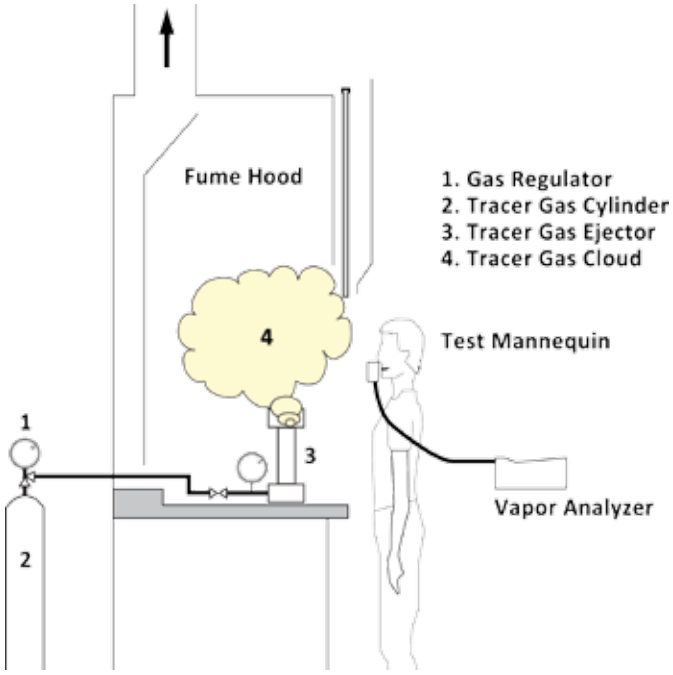
The ANSI/ASHRAE 110 test is a method of testing the performance of laboratory fume hoods. The Kanomax Dif-Kit is ideal for use in performing the Tracer Gas test in accordance with the ANSI/ASHRAE Standard 110-1995. Kanomax also offers alternative tracer gas systems due to concerns to prevent greenhouse gas emissions.

ASHRAE 110 - 1995
Performance Testing

Features:

- Diffuser is made to the design and specifications of Standard drawing #110-83M
- The internal critical orifice ensures a flow rate of 4 liters per minute. Other orifice sizes can be inserted
- Alternative tracer gas systems are available - SF6, NO2, or FM-200 (HFC-227)
- Thermal anemometer for face velocity testing
- Commercial fog machine for flow visualization

Dif-Kit



Specifications	
Model	**Dif-Kit**
Critical Orifice	4 liter per minute
Regulator	Dual Stage, Specialty Gas
Flow Meter	Calibrated 150 mm/200 psi, Glass Tube
Pressure Gauge	0 to 60 psi

Vapor Analyzer

The Vapor Analyzer is factory calibrated for the tracer gases. Response time is less than 10 seconds to 90% response with a stable maximum concentration in less than 30 seconds.

Vapor Analyzer

Specifications	
Type	Single Beam Infrared Spectrophotometer
Sample Flow	10 liter per min (21.2 ft^3/hr)
Sample Cell Volume	0.45 liters (0.0159 ft^3)
Gas Purge	5 Cell Volumes for 99% purge of cell
Concentration Alarm	High & Low (selectable by user)
Interface	USB, RS232
Power Supply	NiMH battery or 120-220V AC
Dimensions	15 x 7.3 x 7.5 inches (381 x 185 x 191 mm)
Weight	18 lbs (8.2 kg)

KANOMAX
The Ultimate Measurements

Applications

Environmental noise measurement

Noise exposure measurement

Industrial vibration testing

Sound and Vibration Meters

Sound Level Meter Model 4431

Precision Sound Level Meter with 0-dB Function

The new Kanomax sound level meter is designed to be compact, lightweight and easy to use. It complies with the type 2 ANSI S1.4 1983 standard , and has an innovative, unique 0-dB feature that eliminates the self-noise of the microphone. This technology extends the lower limit of the measurement range to lower than 0 dB-SPL.

Optional program cards give you the flexibility to add additional functions as needed

Features:

- Lightweight and compact design
- Equipped with highly sensitive electret condenser microphone
- Large 4 digit display with 0.1 dB resolution with backlighting and analog bar graph
- Add additional functions with the program cards
- Includes SD card for data storage, windshield, carrying case, AA batteries, hand strap, and calibration certificate

Specifications

Model	4431
Parameters	Lp, LA, LAeq, LAE, LAmax, LAmin, LAN, Lpeak, LAtm5
Ranges	A: 28 - 130 dB, Z 39 - 130 dB
Weighting	A, C and Z
Time Response	Fast or Slow
Microphone	TYPE 7146nl (-28dB, Stand-alone -26dB)
Standards	Type 1 (4432) or Type 2 (4431) standards for ANSI S1.4 1983, IEC 61672-1
Power Supply	4 AA Batteries or optional AC Adapter (Battery life: approx. 9 hours)
Size & Weight	W3.4" x H12.9" x D1.9", Approx 1 lb.

Accessories

AC-1026:	AC adapter
ACBC-0046-3:	Microphone Cable (3m)*
ACBC-0046-5:	Extension cable (5m)*
ACBC-0071:	BNC-Pin Cable
ACNA-0038W:	Data processing software
ACNA-0038:	Program card (1/1, 1/3 octave analyzer)
ACNA-0038F:	Program card (FFT analyzer)
ACNA-0038R:	Program card (Real Sound Recording)
ACNA-0333:	Tripod

*Additional cable lengths available

Sound Calibrator

Sound Calibrator Model AC2127 implements stable and high-precision calibration by its feedback control function with temperature compensation.

Calibrator Specifications

Model	AC2127
Microphone sizes	1 inch and 1/2 inch (1/2 inch microphone adapter is included)
Sound Pressure Level	94dB (+/-0.3dB)
Frequency Level	1000Hz (+/-0.1%)
Standards	IEC 60942: 2003 Class 1 JIS C1515: 2004 Class 1
Power Supply	2 x AA Batteries
Size & Weight	W4.3" x H2.9" x D1.8", Approx 0.3 lb. (150g)

Pistonphone

Model AC2124A is a standard sound source, which emits 124dB-SPL pure sine tone at 250Hz for calibration of sound level meter.This is used for precise calibration of sound level meter provided with 1-inch, 1/2-inch and 1/4-inch condenser microphones.

Pistonphone Specifications

Model	AC2124A
Sound Pressure Level	124dB
Accuracy	+/- 0.2dB
Frequency	250Hz (+/- 2%)
Power Supply	4 x AA Batteries
Size & Weight	1.5" x 8.8", Approx 1.7 lb. (800g)

KANOMAX
The Ultimate Measurements

Sound Measurement Microphones

Features:

- Wide frequency range: wide range of measurement from low-frequency to ultrasonic frequency (1Hz to 200 kHz) is possible.
- Wide dynamic range: measurement of high sound pressure level up to 170dB is possible.
- Preamplifier integrated microphone: it is also possible to connect directly to an analyzer by using a BNC cable.
- High sensitivity and certain measurement: it is possible to connect directly to analyzer such as an FFT and is easy to measure with low sound pressure levels.

Preamplifier integrated microphone

The preamplifier integrated microphone is compatible with IEPE (Integrated Electronic Piezoelectric Microphone) and can be connected directly to an FFT analyzer or other analyzers, enabling measurements with a highly accurate resolution at low cost. Long-term stability is accomplished by an accelerated aging process under 360°C.

Specifications									
Model	**4156N**	**4158N**	**4160N**	**4152N**	**4153N**	**7146**	**7147A**	**7312**	**7313**
Nominal Diameter	1/4 inch			1/2 inch					
Release Voltage	-56dB (1.6mV/Pa)	-48dB (4.0mV/Pa)		-32dB (25.1mV/Pa)		-26dB (50.0mV/Pa)		-36dB (15.8mV/Pa)	-38dB (12.5mV/Pa)
Pressure Sensitivity	-58dB +/- 3dB	-50dB +/- 3dB	-40dB +/- 3dB	-33dB +/- 3dB		-27dB +/- 2dB		-37dB +/- 2dB	-39dB +/- 2dB
Polarization Voltage	0V								
Frequency Characteristics	20Hz to 40kHz	20Hz to 100kHz	20Hz to 10kHz	20Hz to 20kHz	20Hz to 10kHz	20Hz to 20kHz	20Hz to 10kHz	20Hz to 40kHz	20Hz to 20kHz
Maximum sound pressure level	168dB	150dB	130dB	140dB		135dB		140dB	
Self-noise level	45dB	23dB		18dB		17dB		20dB	
Temperature coefficient	<0.01dB/°C	<0.009dB/°C	<0.7dB/°C	<0.01dB/°C		<0.009dB/°C			
Power supply and voltage	DC15 to 28V								
Constant current	0.5 to 4mA								
Connector	SMB connector			BNC connector					
Dimensions	Ø 0.27" x 1.9"			Ø 0.5" x 2.9"		Ø 0.5" x 3.1"		Ø 0.5" x 2.9"	

Measurement condenser microphone

The condenser microphone can be used for measurements of sound pressure levels with high resolution over wide frequency ranges. A variety of microphone diaphragm diameters 1, 1/2, 1/4, 1/6, 1/8 inch and corresponding frequency characteristics support various applications.

Specifications											
Model	**7012**	**7013**	**7016**	**7017**	**7116**	**7118**	**7020**	**7022**	**7023**	**7047A**	**7146NL**
Nominal Diameter	1/2 inch		1/4 inch		1/6 inch	1/8 inch	1 inch			1/2 inch	
Release Voltage	-36dB (1.58mV/Pa)	-38dB (12.5mV/Pa)	-49dB (3.5mV/Pa)	-58dB (1.3mV/Pa	-60dB (1.0mV/Pa)	-72dB (0.25mV/Pa)	-20dB (100.0mV/Pa)	-26dB (50.0mV/Pa)	-28dB (39.8mV/Pa)		-26dB (50.0mV/Pa)
Polarization Voltage	200V										0V
Frequency Characteristics	10Hz to 40kHz	10Hz to 20kHz	20Hz to 100kHz	20Hz to 20kHz	20Hz to 10kHz	20Hz to 20kHz	20Hz to 10kHz	20Hz to 10kHz	20Hz to 40kHz		20Hz to 20kHz
Maximum sound pressure level	160dB		164dB		170dB		140dB	146dB		160dB	134dB
Self-noise level	19dB	21dB	34dB	46dB	45dB	65dB	2dB	11dB	13dB	20dB	15dB
Temperature coefficient	<0.007dB/°C										
Preamplifier Type	Type 4212		Type 4116				Type 4022			Type 4212	Type 4011
Dimensions	Ø 0.5" x 0.5"		Ø 0.3" x 0.4"		Ø 0.2" x 0.4"	Ø 0.1" x 0.2"	Ø 0.9" x 1.1"	Ø 0.9" x 0.7"		Ø 0.5" x 0.6"	

Vibration Meter Model 4200

Compact, Easy-to-Use Vibration Meter

The new Kanomax vibration meter is designed to be compact, lightweight and easy to use. The magnetic accelerometer attaches easily to machinery for increased accuracy and precise operation. It's the perfect tool to diagnosis problematic vibrations with your industrial machinery or manufactured products.

Features:

- Compact size maximizes technician mobility
- Magnetic accelerometer increases measuring accuracy and ease-of-use
- Includes meter, accelerometer with cable and magnet, contact pin, 2 x AAA batteries, carrying case, and Calibration Certificate

Specifications

Measurement Range	
Acceleration	0.02 to 200 m/s² RMS
Velocity	0.02 to 200mm/s RMS
Displacement	2 to 2000 µm EQp-p
Frequency Range	
Acceleration	3Hz to 10kHz
Velocity	10Hz to 1kHz (Compliant with JIS B0907-1989)
Displacement	10 to 400Hz
Readings	RMS, Peak, EQ Peak, EQ Peak-to-Peak
Output	
AC Output	1Vrms (Full Scale)
Headphone Output	Portable Headphones w/Volume function
Interface	RS232C
Operating Environment	
Temperature	-10 to 50°C
Humidity	30% to 90% (no condensing)
Power Supply	2 x AAA batteries or AC adapter
Dimensions & Weight	5.7"(H)x1.9"(W)x0.9"(D) Approx. 4.6 oz.

Accessories

AC-1046:	AC adapter
AC7812B:	Pickup
ACPV-0148:	Spare Magnet
ACPV-5050:	Strong Magnet
ACNA-0134:	Auscultation Rod
ACSS-22M:	Stud
ACBC-0071:	BNC-Pin Cable
ACBC-0116-3:	Extension Cable 3m*
ACNA-0116:	Data processing software
ACBC-0026:	Communication Cable (RS232)

*Additional cable lengths available

Vibration Monitoring System

Model ACCM-393 is a system to monitor vibration of machinery and other applications. It can quickly detect abnormal vibration condition and provide alarm signal. CM-393 is ideal for continuous vibration monitoring at power plants or production facilities. Either of 2 measurement modes, acceleration or displacement, can be easily selected on the front panel.

Includes storage case, 1 x acceleration pickup with built-in amplifier (Model 7828), pickup cable, and pickup cover.

Specifications

Model		**ACCM-393**
Input Impedance		Approx. 100kΩ
Measurement Sensitivity		20mV/m/s² (200mV/G)
Measurement Range	**Acceleration**	1 to 100mm/s² (0.1 to 10G)
	Displacement	1 to 1000µp-p
Frequency Response	**Acceleration**	5Hz to 1kHz
	Displacement	10Hz to 200Hz
Accuracy		Within +/- 5% of full scale
Filter	**High-pass**	Cut-off Frequency 5Hz to 12dB/oct
	Low-pass	Cut-off Frequency 200Hz to 12dB/oct Cut-off Frequency 1kHz to 12dB/oct
Output	**Signal for level recorder**	4 to 20mA/full-scale Terminal block on the back panel (M4)
	Waveform signal	0 to 2 Vp-p/full-scale BNC connector on the front panel Terminal block on the back panel (M4)
Power Supply		AC 100V +/- 10%, 60Hz
Dimensions		7.9"(H) x 7.5"(W) x 18.5"(D)

*Variety of acceleration pickups are available.

KANOMAX
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Applications

Monitoring worker exposure to airborne contaminants

Indoor Air Quality Assessments

Dust Monitors

Piezobalance Dust Monitor Model 3521 / 3522

- Measures PM 10, Respirable, or PM 2.5 particle matters
- Real-time measurements of dust concentration
- Data logging up to 500 measurements
- Simple cleaning mechanism for easy maintenance
- Complete with data processing software, RS232C cable, cleaning kit, Ni-MH battery pack, AC adapter, carrying case, and calibration certificate

Digital Dust Monitor Model 3443

- Measures PM 10 particle matters
- Compact and Lightweight unit
- Analog output controls other devices
- Data logging up to 100,000 measurements
- PC interface with USB and software for downloading data to your PC
- Complete with rubber protector, shoulder strap, data processing software, USB cable, AC adapter, 2 pcs. LCD protective sheet, rubber cap, 2 pcs. filter, and calibration certificate

Specifications

Model	3521 / 3522	3443
Measuring Method	Piezobalance	Light Scattering
Particle Size Range	0.1 to 10 µm (Model 3521) 0.1 to 2.5 µm (Model 3522)	0.1 to 10 µm
Measuring Range	0.01 to 10.00 mg/m^3	0.001 to 10.000 mg/m^3
Flow Rate	1.0 L/min	1.0 L/min
Datalogging	500 measurements	100,000 measurements
Interface	RS232C	USB
Analog Output	n/a	0 to 1 V / Pulse / Alarm
Power Supply	Ni-MH Battery or AC 100 - 240 V	Li-ion Battery or AC 100 - 240 V
Dimensions	W2.6” x H7.1” x D5.9”	W6.7” x H2.7” x D4.3”
Weight	3.9 lbs (1.75 kg)	2.9 lbs (1.3 kg)

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The Ultimate Measurements

Piezobalance Dust Monitor Model 3521/3522

Optimal Tool for Monitoring Oil Mist

Features:

- Measures PM 10, Respirable, or PM 2.5 particle matters, such as dust, oil mist, fumes, and soot
- Real-time measurements of dust concentration
- Data logging up to 500 measurements and data may be reviewed on screen or printed
- PC interface with RS232C and software for downloading data to your PC
- Easy operation and requires no special training
- Simple cleaning mechanism for easy maintenance
- Includes data processing software, RS232C cable, cleaning kit, Ni-MH battery pack, AC adapter, carrying case, and calibration certificate

Specifications

Model	3521	3522
Measuring Method	Piezobalance	
Particle Size Range	0.1 to 10 µm	0.1 to 2.5 µm
Measuring Range	0.01 to 10.00 mg/m³	
Flow Rate	1.0 L/min	
Datalogging	500 measurements	
Interface	RS232C	
Power Supply	Ni-MH Battery or AC 100 - 240 V	
Dimensions	W2.6" x H7.1" x D5.9"	
Weight	3.9 lbs (1.75 kg)	

Software Included

Accessories

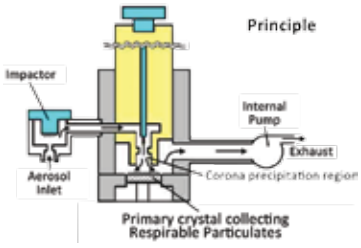
3521-01:	Rechargeable Battery Pack
3521-02:	Carrying Case
3521-03:	10 µm Impactor Nozzle (for 3521)
3521-04:	4 µm Impactor Nozzle (for 3521)
3521-05:	AC Adapter
3521-06:	Cleaning Sponges (3 pieces)
3521-07:	Cleaning Fluid
3521-08:	Communication Cable to PC
3521-20:	Printer Cable
DPU-S245:	Portable Thermal Printer
TP-202L:	Rolled Printer Paper (10 rolls)

Dust Measuring Methods

Piezobalance Method

An air sample enters the system, it travels through the impactor, which captures and removes larger particulates away from the sample. Smaller particulates become electrically charged and deposited on the piezo-crystal. The total mass of the deposited particulates affects the piezo-crystal's frequency. Since the change in frequency is proportional to the mass of the particulates, the actual weight of the particulates is obtained.

Since some particle matters such as oil mist absorb lasers, the Piezobalance dust monitor would be ideal (the light scattering method would not give correct measurements).



Applications:

- Monitoring milling operation
- Monitoring honing
- Monitoring boring operation

Monitoring Milling Operation

Light Scattering Method

When a laser hits particle matter, light scattering occurs. A dust monitor collects the amount of scattering light and calculates the mass concentration in proportion to the scattering light. Mass concentration is based on the density of particle matter, thus gravimetric sampling is required if the density is unknown.

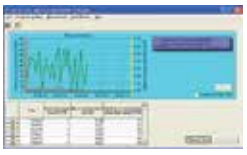
Applications for light scattering dust monitor include Indoor air quality investigations, Point source monitoring, and Personal exposure monitoring.

Monitoring Welding Operation

Digital Dust Monitor Model 3443

Features:

- Measures PM 10 particle matters, such as dust, fumes, and smoke
- Real-time and long term measurements of dust concentration
- Compact and Lightweight unit
- PC interface with USB cable and software for downloading data to your PC
- Analog output controls other devices
- Data logging up to 100,000 measurements and displays MIN / MAX / AVG and Timing graph for review
- Complete with rubber protector, shoulder strap, data processing software, USB cable, AC adapter, 2 pcs. LCD protective sheet, rubber cap, 2 pcs. filter, and calibration certificate



Software Included

With Rubber Protector

Specifications	
Model	**3443**
Measuring Method	Light Scattering
Particle Size Range	0.1 to 10 µm
Measuring Range	0.001 to 10.000 mg/m³
Flow Rate	1.0 L/min
Datalogging	100,000 measurements
Interface	USB
Analog Output	0 to 1 V / Pulse / Alarm
Power Supply	AA Battery or AC 100 - 240 V
Dimensions	W6.7" x H2.7" x D4.3"
Weight	2.9 lbs (1.3 kg)

Accessories

3442-01: Analog Output Cable
3442-02: Rubber Protector
3442-04: LCD Protective Sheet
3442-05: Carrying Case
3442-10: Rubber Cap
3431-03: Filter (10 pc)
6113-02: AC Adapter
CX-440: Tripod

CEGRIT Automatic Flyash Sampler

Isokinetic Sampling for Particle Emission Testing

With no moving parts, each CEGRIT sampler collects a sample from one point in the boiler duct. Operating on duct vacuum to drive its atmospheric-air ejector, the CEGRIT maintains near-isokinetic sampling to keep collecting unbiased sample as boiler load and duct vacuum vary.

Features:

- Operates continuously with no moving parts
- High efficiency sampling rate for fine pulverized dust
- Industrial construction
- Cyclone removes to facilitate periodic cleaning
- Two manometer tap points to monitor draft pressure

Applications:

- All combustion or other processes where airborne particle emission occur
- Smoke and particle emissions or grit burdens from boiler stacks
- Carbon determination in Fly ash
- Incinerator emission compliance

Accessories

C8406: Probe (2 m)
C8408: Probe (3 m)
C8407: Probe Extension (10 ft)
C3101: Inlet Nozzle 1/2" (12.7 mm)
C3102: Inlet Nozzle, 5/8" (15.9mm)
C3103: Inlet Nozzle, 3/4" (19.0 mm)
C3104: Inlet Nozzle, 3/8" (9.5 mm)
C5019: Heater Jacket, 100W, 240 Volt
C5020: Heater Jacket, 100W, 110 Volt

KANOMAX
The Ultimate Measurements

Applications

Cleanroom Certification

Indoor Air Quality Investigation

Filter Testing

Particle Counters

Handheld Particle Counter Model 3887

Simple and easy-to-use, affordable handheld particle counter

- Simultaneously measures and displays 3 particle sizes
- Built-in flow sensor ensures high accuracy measurement
- Store up to 10,000 measurements
- PC interface with RS232C and software for real-time measurements and downloading data to your PC
- Complete with Isokinetic probe, zero filter, meter stand, data processing software, RS232C cable, 4 pcs. AA batteries, battery charger, AC adapter, and calibration certificate

Handheld Particle Counter Model 3886 Geo-α

Lightweight handheld particle counter with environmental sensors

- Simultaneous measurements of 5 particle sizes
- Air velocity, temperature, and humidity measurements with optional probes
- Data logging up to 500 measurements
- PC interface with RS232C and optional software for real-time monitoring with timing graph
- Includes zero filter, metal handle, 4 pcs. AA batteries, battery charger, AC adapter, and calibration certificate

Portable Particle Counter Model 3910 & 3905

Small footprint, lightweight portable particle counter available with two different flow rates

- Simultaneous measurements of 6 particle sizes
- 50.0 or 28.3 L/min flow rate
- Small footprint, Stainless enclosure
- Large touch screen LCD displays all measurements simultaneously
- Store up to 10,000 measurements
- PC software allows Remote control, Real-time measuring, and Registering map
- Complete with Quick-start guide, AC adapter, zero filter, Isokinetic probe with 79 inch (2 m) tubing, inlet nozzle, data processing software, memory card, 2 rolls of cleanroom-grade printer paper, Li-ion battery, and calibration certificate

Specifications

Model	3887	3886	3910 and 3905
Particle Sizes	0.3 / 0.5 / 5.0 µm	0.3 / 0.5 / 1.0 / 3.0 / 5.0 µm	0.3 / 0.5 / 1.0 / 3.0 / 5.0 / 10.0 µm
Flow Rate	0.1 cfm (2.83 L/min)	0.1 cfm (2.83 L/min)	50.0 L/min (3910) or 28.3L/min (3905)
Light Source	Laser Diode	Laser Diode	Laser Diode
Counting Efficiency	50+/-20% @ 0.3 µm	50+/-20% @ 0.3 µm	50+/-20% @ 0.3 µm
Coincidence Loss	Less than 5% at 2,000,000 particles/ft^3	Less than 5% at 2,000,000 particles/ft^3	Less than 10% at 500,000 particles/ft^3
Zero Count Level	Less than 1 count per 5 minutes	Less than 1 count per 5 minutes	Less than 1 count per 5 minutes
Datalogging	10,000 measurements	500 measurements	10,000 measurements
Interface	RS232C or USB	RS232C or USB	Ethernet, USB, Memory card slot (MMC)
Option Sensor	n/a	Air Velocity / Temperature, Humidity	Air Velocity, Temperature, Humidity
Enclosure	Molded Plastic	Molded Plastic	Stainless Steel
Power Supply	4 x AA Batteries or AC 100 - 240 V	4 x AA Batteries or AC 100 - 240 V	Li-ion Battery or AC 100 - 240 V
Dimensions	W4.4” x H7.8” x D2.8”	W4.5” x H8.3” x D2.8”	W7.9” x H8.1” x D7.9”
Weight	1.5 lbs (680 g)	2.2 lbs (980 g)	14.2 lbs (6.44 kg)

KANOMAX
The Ultimate Measurements

Handheld Particle Counter Model 3887

Features:

- Simultaneously measures and displays 3 particle sizes
- Built-in flow sensor ensures high accuracy measurements
- Store up to 10,000 measurements
- PC interface with RS232C and software for real-time measurements and downloading data to your PC
- Complete with isokinetic probe, zero filter, meter stand, data processing software, RS232C cable, USB to serial adapter, 4 pc. AA batteries, battery charger, AC adapter, carrying case, and calibration certificate

Software Included

Specifications	
Model	**3887**
Particle Sizes	0.3 / 0.5 / 5.0 µm
Flow Rate	0.1 cfm (2.83 L/min)
Light Source	Laser Diode
Counting Efficiency	50+/-20% @ 0.3 µm
Coincidence Loss	Less than 5% at 2,000,000 particles/ft³
Zero Count Level	Less than 1 count per 5 minutes
Datalogging	10,000 measurements
Interface	RS232C or USB
Enclosure	Molded Plastic
Power Supply	4 x AA Batteries or AC 100 - 240 V
Dimensions	W4.4" x H7.8" x D2.8"
Weight	1.5 lbs (680 g)

Accessories

3887-02:	Carrying Case
3887-07:	Printer Cable
DPU-S245:	Portable Thermal Printer
TP-202L:	Rolled Printer Paper (10 rolls)
CX-440:	Tripod
301APK:	Intl. Plug Adapter Kit

Carrying Case

Handheld Particle Counter Model 3886 Geo-α

Features:

- Simultaneous measurements of 5 particle sizes
- Air velocity, temperature, and humidity measurements with optional probes
- Data logging up to 500 measurements
- PC interface with RS232C and optional software for real-time monitoring with timing graph
- Compact and lightweight, easy handling
- Includes AC adapter, zero filter, metal handle, 4 pc. AA batteries, battery charger and calibration certificate

Software for Monitoring and Remote Control

Specifications	
Model	**3886**
Particle Sizes	0.3 / 0.5 / 1.0 / 3.0 / 5.0 µm
Flow Rate	0.1 cfm (2.83 L/min)
Light Source	Laser Diode
Counting Efficiency	50+/-20% @ 0.3 µm
Coincidence Loss	Less than 5% at 2,000,000 particles/ft³
Zero Count Level	Less than 1 count per 5 minutes
Datalogging	500 measurements
Interface	RS232C or USB
Optional Sensor	Air Velocity / Temperature, Humidity
Enclosure	Molded Plastic
Power Supply	4 x AA Batteries or AC 100 - 240 V
Dimensions	W4.5" x H8.3" x D2.8"
Weight	2.2 lbs (980 g)

Accessories

0842:	Temperature and RH Probe
0843:	Air Velocity Probe
0843-01:	Extension Rod for 0843
3886-02:	Carrying Case
3886-04:	Isokinetic Probe
S388-61:	Data Processing Software for Windows
3886-07:	Printer Cable
3886-08:	Communication Cable to PC
DPU-S245:	Portable Thermal Printer
TP-202L:	Rolled Printer Paper (10 rolls)
CX-440:	Tripod

Portable Particle Counter Models 3910/3905

Smallest and lightest portable particle counters

Features:

- Simultaneous measurements of 6 particle sizes
- Small footprint, Stainless enclosure
- Availabe in 50.0 or 28.3 L/min flow rates
- Complies with all requirements of ISO 21501-4
- Large touch screen LCD displays all measurements simultaneously
- Store up to 10,000 measurements
- 21 CFR Part 11 compliance
- Complete with quick-start guide, AC adapter, zero filter, isokinetic probe with 79 inch (2 m) tubing, inlet nozzle, data processing software, memory card, 2 rolls of cleanroom-grade printer paper, 1 x Li-ion battery, and calibration certificate

Specifications		
Model	**3910**	**3905**
Particle Sizes	0.3 / 0.5 / 1.0 / 3.0 / 5.0 / 10.0 µm	
Flow Rate	50.0 L/min	28.3L/min
Light Source	Laser Diode	
Counting Efficiency	50+/-20% @ 0.3 µm	
Coincidence Loss	Less than 10% at 500,000 particles/ft^3	
Zero Count Level	Less than 1 count per 5 minutes	
Datalogging	10,000 measurements	
Interface	Ethernet, USB, Memory card slot (MMC)	
Optional Sensor	Air Velocity, Temperature, Humidity	
Enclosure	Stainless Steel	
Power Supply	Li-ion Battery or AC 100 - 240 V	
Dimensions	W7.9" x H8.1" x D7.9"	
Weight	14.2 lbs (6.44 kg)	

Model 3910/05

Model 3900

Small, Lightweight Unit

Optional environmental sensor

Optional Climomaster Environmental Sensor measures airflow, temperature and humidity.

Climomaster probe for environmental measurements

Probe Specifications	
Model	**6531-2G-P**
Probe Type	Uni-Directional
Air Velocity	2 to 6000 fpm
Temperature	-4 to 158°F
Relative Humidity	2.0 to 98.0% RH

Accessories

6531-2G-P: Air velocity, Temp, RH probe with 2 m cable
3910-01: Carry case
3910-02: Battery charger
3910-03: Spare Li-ion battery
3910-04: Alarm-output cable
3910-05: Pressure-sensor (w/ connection cable)
3910-08: Zero filter
3910-09: Printer paper
CRVAL: Validation IQ/OQ Document

KANOMAX
The Ultimate Measurements

Handheld Condensation Particle Counter Model 3800

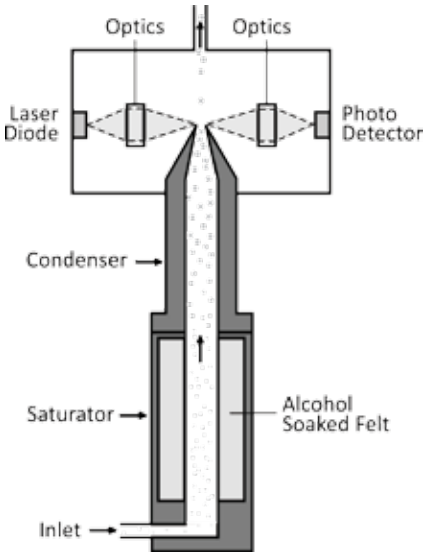
Optimal Screening Tool for Nano Size Particles

Features:

- 0.015 micron (15nm) minimum sensitivity
- Handheld and Lightweight Aerosol Research Instrument
- Store up to 10,000 measurements
- PC interface with USB and software for real-time measurements and display time fluctuation graph
- Complete with zero filter, data processing software, USB cable, alcohol bottle, 6 pc. AA batteries, carrying case, and calibration certificate

Software Included

Measuring Priciple



Specifications	
Model	**3800**
Measuring Object	Airborne Particle Matter
Particle Sizes	0.015 to 1.0 µm
Flow Rate	0.7 L/min
Light Source	Laser Diode
Counting Efficiency	100% @ 0.05 µm More than 50% @ 0.015 µm
Coincidence Loss	Less than 5% at 100,000 particles/cm^3
Zero Count Level	< 1 count per 5 minutes
Alcohol Supply	Isopropyl Alcohol
Datalogging	10,000 measurements
Interface	USB
Power Supply	6 x AA Batteries or AC 100 - 240 V
Dimensions	W4.7" x H11.0" x D5.1"
Weight	3.3 lbs (1.5 kg)

Applications

Checking Worker Exposure to Airborne Contaminants

Leakage Testing

Engine Exhaust Testing

Accessories

3800-01: AC Adapter
3800-02: Zero Filter
3800-03: Alcohol Bottle
3800-04: Storage Cap
3800-05: Alcohol Cartridge
3800-06: Spare Felt and Wire Mesh
3800-07: Communication Cable to PC
3800-08: Carrying Case
3800-10: Sampling Probe with 1m Tubing
3800-11: Printer Cable
DPU-S245: Portable Thermal Printer
TP-202L: Rolled Printer Paper (10 rolls)

Sampling Probe

Remote Particle Sensor with Analog Output

2-channel remote particle sensors for facility monitoring applications

Kanomax particle sensors with analog output are designed to fit into your existing monitoring system, or they can be used as a stand-alone unit to monitor a critical area when connected to an alarm or controller. The Kanomax particle sensor is available with a 1.0 CFM flowrate and also comes in two different ranges: 0.3 and 0.5 microns or 0.5 and 5.0 microns.

Features:

- Light scattering particle sensor
- 1.0 cfm flow rate (28.3 lpm)
- Analog output makes it easy to integrate into existing systems
- 0.3 or 0.5 micron sensitivity
- Compact body with stainless enclosure
- Fully compatible with the Kanomax Cleanroom Monitoring System as well as third party existing systems

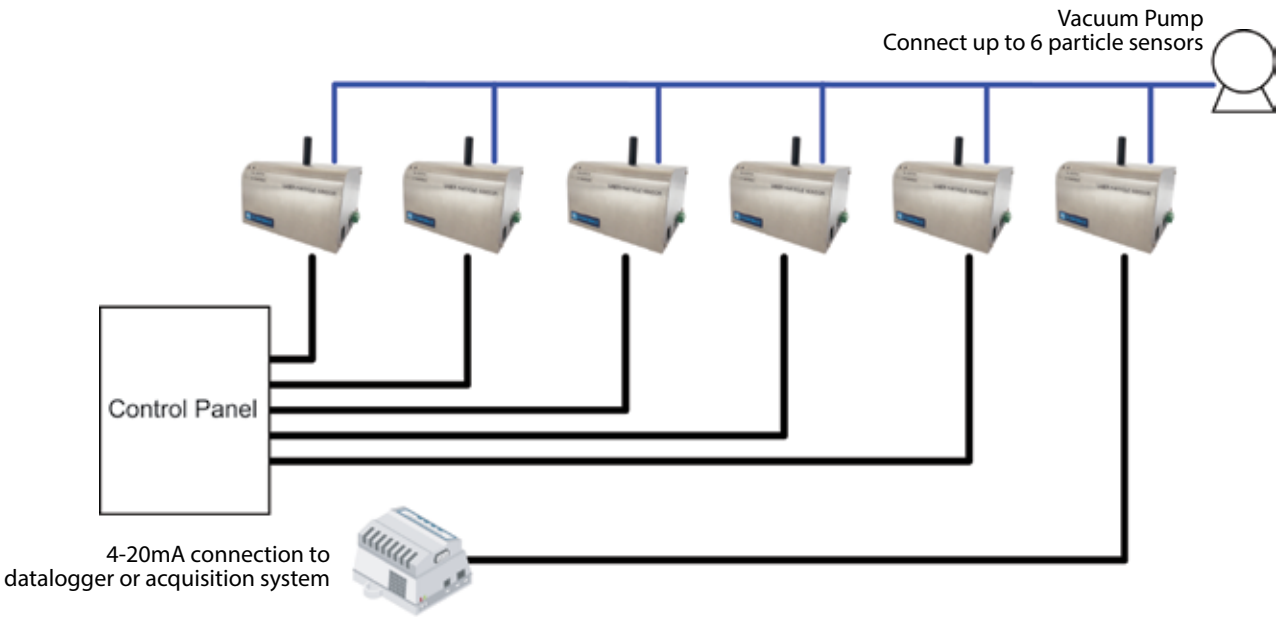
Applications:

- Cleanroom Facility Monitoring
- Food Industry
- Aerospace
- Hospital Surgical Rooms

Specifications

Model	3716A	3717A
Measuring Object	Airborne Particle Matter	
Particle Sizes	0.3 / 0.5 µm	0.5 / 5.0 µm
Flow Rate	1.0 cfm (28.3 L/min) *External vacuum source is required	
Light Source	Laser Diode	
Counting Efficiency	50% @ 0.3 µm	50% @ 0.5 µm
Coincidence Loss	Less than 5% at 500,000 particles/ft^3	
Zero Count Level	< 1 count per 5 minutes	
Interface	RS485 & 4-20mA	
Enclosure	Stainless Steel	
Power Supply	9 - 28V (AC adpter supplies 12V)	
Dimensions	W6.3" x H5.1" x D3.9"	
Weight	3 lbs (1.5 kg)	

Example Configuration: Shows 6 sensors connected to datalogger via the 4-20 mA output. It's easy to connect them to a datalogger or any other device that will accept an analog signal. Note that a vaccuum source is required for the sensors.



KANOMAX
The Ultimate Measurements

Particle Sensors

Large Particle, PM and Pollen Sensors

The pollen sensor detects the particle with light scattering method, using one light emitter and two light receptors, and discriminates pollen from other particles with two factors "scattered light intensity" and "degree of polarization".

The large particle sensor is the sensor for industrial applications to detect particles sized over 10 micron. This sensor is used in production lines that dislike large particles.

"PM2.5" is known as the fine particle which is one of the cause of asthma or respiratory disease, etc. Especially, diesel soot commonly referred to as PM2.5 is suspected to raise the risk of lung cancer. Our PM sensor has a high correlation with Federal Equivalent Method (FEM) and achieves low-cost, simple installation for multipoint time-series monitoring.

Specifications

Model	PS2 Pollen Sensor	Large Particle Sensor	PM Sensor
Detectable particle size	approx. 15µm and larger	approx. 15µm and larger	approx. 0.3µm and larger Concentration Range: equiv. PM2.5 (0-200 µg/m³)
Supply Voltage	12VDC		
Operating Temperature	-10 to 45°C		
Operating Humidity	20 to 80% RH (no condensation)		
Dimensions	71.4 x 76.4 x 36.7 mm		
Weight	120g (approx)	120g (approx)	130g (approx)

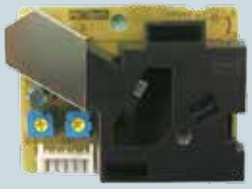
Particle and Aerosol OEM Sensors

Designed for easy OEM Integration

Particle Sensor Units - Based on the light scattering method, it always detects airborne particles. Pulse output that corresponds to concentration per unit volume of particles can be obtained, with using an original detection method based on light scattered principle similar to the particle counter.

Aerosol Sensor Unit - Particulates of 0.5 microns or larger can be monitored. The aerosol sensor unit can be used to keep optimum driving of filtering equipment related to a clean room depending on actual condition of cleanliness level.

Particle Sensor Units



PPD42NJ

PPD60PV

Features:

- Unique air sampling method using "heater" to generate updraft, preventing choked flow. Suction pump is not necessary.
- Stable and sensitive detection for particulates of 0.5 microns and larger can be monitored.
- Long life laser. 20,000 hours
- Compact size, low cost and easy to integrate into your original equipment.

Particle Sensor Applications:

- Air Purifier
- Air Quality Monitor
- Air Conditioner
- Ventilation
- Vaccuum Cleaner

Aerosol Sensor Applications:

- Clean booth/small
- Fan Filter Unit
- Clean Unit
- Clean Room related filtration system

Specifications

Model No.	PPD42NJ	PPD60PV
Detectable Particle Size	Approx. 1 µm & larger	Approx. 0.5 µm & larger
Supply Voltage	5VDC	
Operating Temperature	0 to 45°C	
Operating Humidity	95% RH or less (no condensation)	
Output Method	Digital	Digital or Analog
Dimensions	59x45x22 mm	88x60x20 mm
Weight	24 g	36 g

Particle Monitor AES-1000

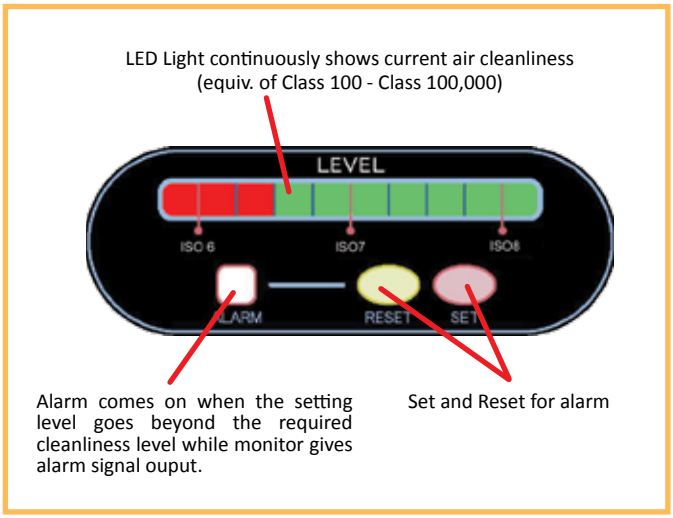
Continuous Particle Monitoring for Modular Clean Room Applications

The AES-1000 particle monitoring system provides near real time stable particle measurements at low cost. Measurement covers the equivalent range of ISO class 5 through ISO class 8.

It uses a long life semiconductor laser to detect optical scatter by particles and an integral heater to provide continuous flow by thermal convection to provide a long maintenance free life.

Features:

- Stable and sensitive detection for particulates of 0.5 microns and larger.
- Easy-to-read air cleanliness level, equivalent of ISO5/ Class 100 -ISO8/Class 100,000.
- Unique air sampling method using “heater” to generate updraft, preventing choked flow. Suction pump is not necessary.
- Alarm comes on when the setting level goes beyond the required cleanliness, while monitor gives alarm signal output.
- Link to Ethernet system with purpose of monitoring at multiple locations.
- 20,000 hour long life laser.
- Compact and light, easy installation and Low cost.


LED Light continuously shows current air cleanliness
(equiv. of Class 100 - Class 100,000)
LEVEL
ISO 6
ISO7
ISO6
ALARM
RESET
SET
Alarm comes on when the setting level goes beyond the required cleanliness level while monitor gives alarm signal ouput.
Set and Reset for alarm

Applications:

- Monitor cleanrooms
- Pharmaceutical / Semiconductor / Food Industry
- Buffer Zone Monitoring
- Indoor Air Quality

Wall-mount Monitor

Specifications	
Model	**AES-1000**
Monitoring Particle Size	0.5 microns
Display	10 x LED lights shows equivalent of Class; 100(ISO 5), 1,000(ISO 6), 2,000, 3,000,5,000,10,000(ISO 7), 20,000, 30,000, 10,000, 100,000(ISO 8)
Sampling Method	Updraft airflow generated by built-in heater enables air sampling
Optics	Semiconductor Laser, 20,000 hour life
Alarm Display	Alarm LED light comes on when reaching to setting level
Alarm Output	TTL Open collector output in sync with alarm display
Interface	Ethernet X 1 port
Supply Voltage	12VDC+/-10% 500mA
Operating Temp/Humidity	0 to 40 deg. C, 30 to 80%rh

PC Software is Included

KANOMAX
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Cleanroom Monitoring System

The Kanomax Cleanroom Monitoring System (CRMS) provides an automated means to monitor and gather airborne particle counts and other parameter levels in controlled environments. The CRMS allows users to perform a variety of functions from a PC, including changing alarm settings and viewing particle count concentrations.

Features:

- Compact stainless enclosure with sensors
- Multi-parameter measurements: Particle count, Air velocity, Temperature, Humidity, and Differential pressure
- Multi-function, user-friendly monitoring software
- 1 PC system controls up to 128 sensors
- Alarm outputs: warning light, on-screen, or pager notification
- No system down-time: each sensor is replaceable for repair and recalibration

Particle Sensors

Features:

- Light scattering particle sensor
- Durable stainless enclosure is easy to sanitize during whole facility cleaning

Specifications

Model	3714	3715
Measuring Object	Airborne Particle Matter	
Particle Sizes	0.3 / 0.5 µm	0.5 / 5.0 µm
Flow Rate	0.1 cfm (2.83 L/min) *External vacuum source is required	
Light Source	Laser Diode	
Counting Efficiency	50% @ 0.3 µm	50% @ 0.5 µm
Coincidence Loss	Less than 5% at 1,000,000 particles/ft^3	
Zero Count Level	< 1 count per 5 minutes	
Interface	RS485	
Enclosure	Stainless Steel	
Power Supply	DC24V (Supplied from the 3770)	
Dimensions	W5.0" x H2.8" x D1.6"	
Weight	1.1 lbs (500 g)	

Features:

- Light scattering particle sensor
- 1.0 cfm flow rate (28.3 lpm)
- Analog output makes it easy to integrate into existing systems

Specifications

Model	3716A	3717A
Measuring Object	Airborne Particle Matter	
Particle Sizes	0.3 / 0.5 µm	0.5 / 5.0 µm
Flow Rate	1.0 cfm (28.3 L/min) *External vacuum source is required	
Light Source	Laser Diode	
Counting Efficiency	50% @ 0.3 µm	50% @ 0.5 µm
Coincidence Loss	Less than 5% at 500,000 particles/ft^3	
Zero Count Level	< 1 count per 5 minutes	
Interface	RS485 & 4-20mA	
Enclosure	Stainless Steel	
Power Supply	9 - 28V	
Dimensions	W5.9" x H4.7" x D3.9"	
Weight	3 lbs (1.5 kg)	

Features:

- 0.2 µm sensitivity particle counter
- Digital and analog outputs are available
- Analog output for Multiplexer

Specifications

Model	3792-01
Measuring Object	Airborne Particle Matter
Particle Sizes	0.2 / 0.3 µm
Flow Rate	0.1 cfm (2.83 L/min)
Light Source	Laser Diode
Counting Efficiency	50% @ 0.2 µm
Coincidence Loss	Less than 5% at 1,000,000 particles/ft^3
Zero Count Level	< 1 count per 5 minutes
Interface	RS485 / 4 to 20 mA for Multiplexer
Power Supply	AC 100 to 240 V
Dimensions	W4.6" x H5.3" x D6.7"
Weight	6.6 lbs (3 kg)

Interface Box

Features:

- Converts analog input to digital
- Supplies power to the sensor

Specifications	
Model	**3772-02**
Input	4 to 20 mA / 0 to 1 V / 1 to 5 V
Output	RS485
Power Supply	DC24V (Supplied from the 3770)
Dimensions	W5.5" x H3.1" x D1.6"
Weight	1.1 lbs (500 g)

with Differential Pressure Sensor

Distributors

Features:

- Supplies data communication and power to sensors via RS485
- 1 unit connects up to 8 sensors

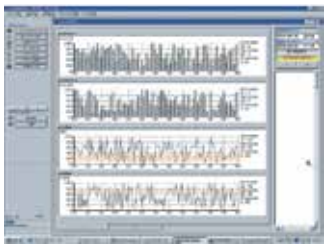
Specifications	
Model	**3770**
# of Channels	8
Interface	RS485
Power Supply	AC 85 to 132 V or AC 170 to 267 V
Dimensions	W11.8" x H3.9" x D7.9"
Weight	6.6 lbs (3 kg)

Cleanroom Monitoring Software

Features:

- Continuous monitoring and data processing software
- Remote monitoring via LAN
- Multi-function: Map display at a glance, Real-time graph, Maintenance Indication, and Data table

Map

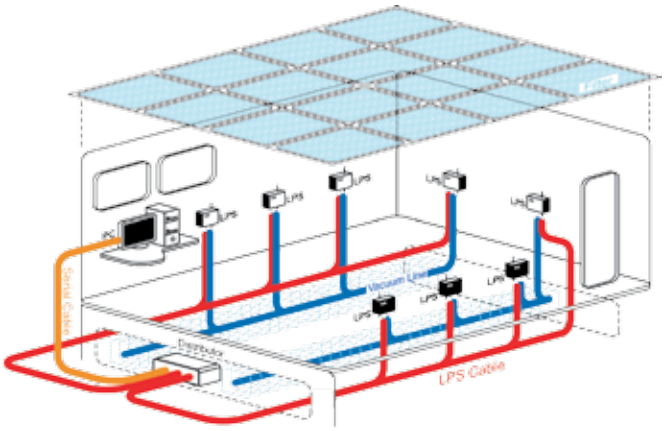


Trend Graph

System Examples

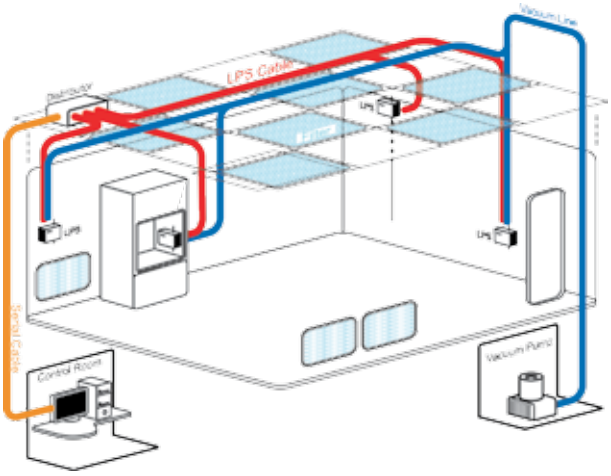
■ Industrial Cleanroom

Semiconductor, HDD, Flat Panel Display, Electronics



■ Bio-medical Cleanroom

Food, Pharmaceutical, Hospital surgical rooms



KANOMAX
The Ultimate Measurements

Aerosol Research Instruments

Our line of aerosol research instruments covers a variety of applications.

Industrial hygiene

Health effect research

Nano-particle research

Nanosampler

Portable Aerosol Mobility Spectrometer (PAMS)

Air pollution

Ambient air quality research

Ambient Air Quality Monitor

Condensation Particle Counter

Earth sciences

Environmental research

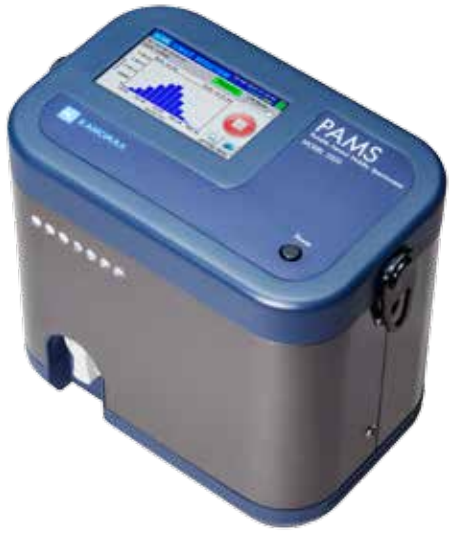
Climate change research

Black Carbon Monitor

Aerosol Particle Mass Analyzer

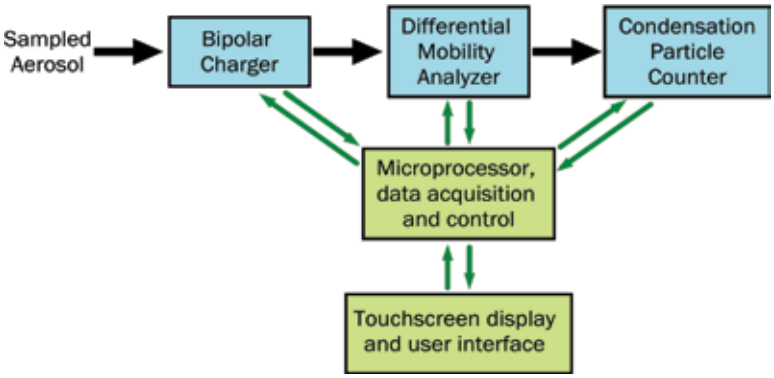
Portable Aerosol Mobility Spectrometer (PAMS)

Small, lightweight mobility size spectrometer



Features:

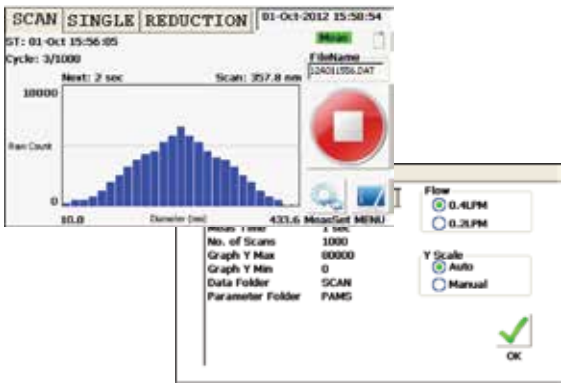
- Electrical mobility size spectrometer designed for portable, mobile, or handheld aerosol sampling applications
- Provides number-weighted diameter distribution of aerosols over the entire submicrometer range (10 to 863nm) in one scan
- Uses a non-radioactive bipolar aerosol charger to allow easy access to sampling sites with tight safety regulations
- Bipolar charger significantly reduces measurement uncertainty of larger particles in the submicrometer range
- Can be used in two modes: Single diameter count mode: to get a total count within a narrow size range or Size distribution mode: to get an automated size distribution measurement over desired size range or size resolution
- Stand-alone, battery-operated instrument; no external computer needed
- Weighs only 4.5 kg and measures 23 x 23 x 15 cm



Operation:

Sampled aerosol is charge-conditioned using a non-radioactive, bipolar charger which brings the particles to steady-state charge distribution. Particles are subsequently sorted according to their electrical mobility in a differential mobility classifier (DMA). Classified particles are detected and counted downstream using a condensation particle counter (CPC).

Specifications	
Model	**3300**
Measuring Modes	Single size mode (single size concentration) Scan mode (size distributions)
Size Range	0.2LPM: 14.5 to 863 nm 0.4LPM: 10 to 433 nm
Scan Resolution	0.2LPM: 14 channels 0.4LPM: 27 channels
Scan Time	0.2LPM: 42 sec to minutes for one scan 0.4LPM: 81 sec to minutes for one scan
Concentration Range	0 to 100,000 particles /cm^3
Flow Rate	Inlet: 0.7 LPM Sample: 0.05 LPM
Bipolar Charger	Inlet: 0.7 LPM Sample: 0.05 LPM
Condensing Fluid	Isopropyl alcohol
Display	Color touchscreen
Dimensions	9.1 x 9.1 x 5.9 inch (23 cm x 23 cm x 15 cm)
Weight	9.9 lbs (4.5 kg)



Accessories

3300-05: Spare Alcohol Cartridge
3300-08: Spare Lithium-ion Battery
3300-09: Battery Charger
3300-10: Carrying Case

KANOMAX
The Ultimate Measurements

Aerosol Particle Mass Analyzer Model APM-3601

Lightweight, Desktop Aerosol Particle Mass Analyzer

Aerosol Particle Mass Analyzer classifies particles by mass based on the balance between centrifugal force and electrostatic force. Particle size distribution measurement is normally used in order to measure nanosized particle distribution. While DMA (Differential Mobility Analyzer) classifies particles by particle size utilizing electrostatic force, APM classifies particles by mass based on entirely new classification principles. APM classifies aerosol particles of 0.01 ~ 100 femtograms.
Particle density distribution can be attained by combining the APM and DMA.

Applications:

- Mass distribution measurements
- Particle density research
- Monodisperse aerosol generation

Features:

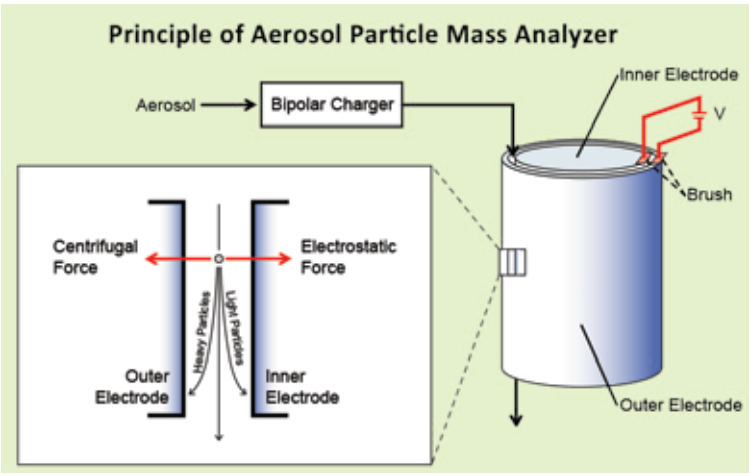
- Lightweight, Desktop Unit
- Measurement software, communication cable, extension board, extension adapter and box, and plastic case are available as options

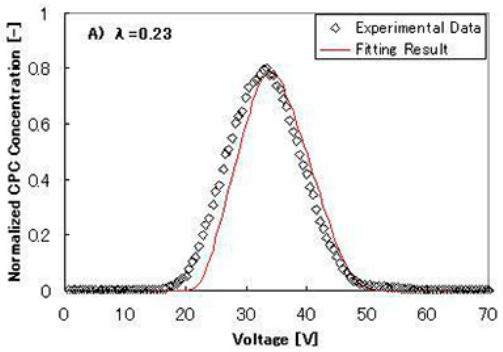
Rotating Cylinder Assembly

Control Unit

Specifications

Model	APM-3601
Particle Mass Range	0.01 to 1000 femtogram Equivalent to approx. 14 nm to 1.3 µm for particle density of 1 g/cm^3
Maximum Rotation Speed	1,000 to 14,000 rpm
Maximum Voltage	Up to 2000V
Rotating Cylinder Dimensions	Inner Cylinder Diameter: 48 mm Gap between Inner and Outer Cylinders: 1 mm Cylinder Length: 100 mm
Sampling Flow Rate	0.3 to 1.0 L/min (0.3 L/min is recommended)
Power Supply	Single-phase AC100 ~ 240V
Dimensions	Main Unit: W 16.9" x H 5.5" x D 7.9" Control Unit: W 16.9" x H 7.1" x D 13.8"
Weight	Main Unit: 23 lbs (10.5 kg) Control Unit: 15 lbs (7 kg)





APM experimental data comparison with theoretical curve at 100nm (PSL)

Black Carbon Monitor Model 3130

Continuous Soot Monitoring System

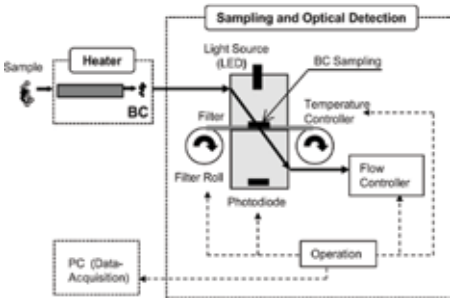
The Model 3130 monitors changes in transmittance across an automatically advancing quartz fiber filter tape using an LED at a 565 nm wavelength. To achieve measurements with high sensitivity and a lower detectable light absorption coefficient, the Model 3130 uses a double-convex lens and optical bundle pipes to maintain high light intensity and signal data, obtained at 1000 Hz.

Features:

- Measures black carbon concentration in the air in real time
- Preprocessing of sample air improves measurement accuracy
- Automatic filter feed enables continuous measurement for extended periods
- Advanced detection sensitivity enables measurement in low concentrated areas
- Complete with inlet heater, pump, pump controller, 2.5 µm-cut impactor, software, and power cable

Specifications

Model	3130
Measurement Method	Light Absorption Method
Light Source	LED Wavelength 565 nm
Lowest Detection	0.05 µg/m³ @1 min @0.8 L/min
Collection Flow Rate	0.8 L/min
Collection Filter	Fiberglass Filter (Length: 25 m)
PC Interface	USB
Power Supply	100 VAC, 6A
Dimensions	W 17" x H 8.7" x D 13.9"
Weight	37.5 lbs (17kg)



System Diagram

Nanosampler Model 3180

Inertial Filter for Aerosol Collection

Fiber filters utilize several mechanisms for aerosol collection such as inertial, gravitational settling, interception, and diffusion. Each collection efficiency depends on particle size and filtration velocity. Large particles are collected in a filter by inertial impaction at a high filtration velocity while small particles are removed from the air by Brownian diffusion. The Model 3180 controls its diffusion collection increasing filtration velocity, and collecting particles only by inertia.

Features:

- Particle classification as small as 0.1 µm
- 5 stages of PM10, 2.5, 1.0, 0.5, 0.1 and backup filter
- Large sample flow rate of 40 L/min
- Includes 1 box of quartz fiber filter (55mm x 100 pc.), and 5 sets of PM0.1 cartridge
- Pump unit (Vacuum pump + Rota meter with valve), PM0.1 cartridge case (1 case for 5 cartridges), Quartz fiber filter case (1 set of 20 cases), PM0.1 absorption materials (10 sets) are available

Specifications

Model	3180
Classification Method	Inertial Collection
Classification Range	PM 10, PM 2.5, PM 1.0, PM 0.5, PM 0.1 and Backup filter
Absorption Material	Quartz Fiber Filter: PM 10, PM 2.5, PM 1.0, PM 0.5, and Backup fiter SUS fiber: PM0.1
Sampling Flow Rate	40 L/min
Dimensions	Ø 3.5" x 8.3"
Weight	6.6 lbs (3 kg)

KANOMAX
The Ultimate Measurements

Dust Sentry

Accurate and affordable real-time outdoor particulate monitoring

The Dust Sentry provides real time, continuous particle measurement of TSP, PM10, PM2.5 or PM1 with datalogging and alarm relay outputs. Numerous integrated options including SMS and/or email notifications, weather sensors, noise and mounting equipment make the Dust Sentry a flexible base system suitable for a wide range of applications.

Features:

- Real time particle monitoring, Measures and reports data in 1 minute intervals
- Accurately measures TSP, PM10, PM2.5 or PM1
- On board data storage for up to 15 years of data
- Web-based and GSM data retrieval and alerts
- Gravimetric filter
- Option to integrate weather, wind, temp/RH sensors, and sirens
- Tough weatherproof enclosure with solar shielding for hot climates
- Quick installation and relocatable
- Datalogging and configuration software included

Specifications

Model	DS 10	DS 25	DS 1
Measurement Technology	Near forward light scattering nephelometry		
Range	0-2000 µg/m3		
Accuracy	+/- (2 µg/m³ + 5% of reading)		
Cut Points Available	PM 10	PM 2.5	PM 1.0
Sample Flowrate	2.0 LPM		
Inlet	Heated		
Alarm	Relay and SMS (optional)		
Datalogging	2GB SD card (>15 years data storage)		
Reference Filter	25mm GF filter		
Outputs	RS232 & cellular IP Gateway		
Wireless Communication Options	Low power RF modem		
Environmental Operating Range	-10°C to +45°C; 10 to 95% RH (NC)		
Power Requirements	Mains (100 to 260VAC) or regulated 12VDC (10W)		
Enclosure	Lockable & weatherproof GRP cabinet IP65; 685 x 350 x 300mm (including solar shield armour & mounting brackets)		
Weight	<12kg		

Compared to reference-equivalent monitors like TEOMs and BAMs which lack sensitivity at short sampling periods, the Dust Sentry reports accurately at 1 minute intervals and has a much lower total cost of ownership (up to 5x less). In addition, the Dust Sentry is compact, re-locatable and can integrate wind and weather sensors for maximum utility.

Accessories

OPTIONAL SHARP CUT CYCLONES

DS SC10: PM10 Cyclone
DS SC25: PM2.5 Cyclone
DS SC1: PM1.0 Cyclone

OTHER SENSORS AND MODULES

DS AUX: Auxillary Module
DS 420: 4-20mA Module
DS R47: 47mm AnalysisFilter
DS R1: Gill WindSonic Sensor
DS R25: Vaisala WTX520 Weather Transmitter

REMOTE COMMUNICATION OPTIONS

DS R39: Gatetel GT-HE910 Modem
DS R40: Orbit Serial Port Extender
DS O12: 12 Month Orbit Data Access

CONSUMABLES, PARTS AND TOOLS

DS CM: Control Module
DS R10: Sampling Pump
DS R31: PM Filters
DS R20B: Flowmeters (x2)
DS R34: PM Purge Pump
DS R56: Zero Filter & Flow Assembly
CAL R4: Factory Calibration PM

AQM60 Ambient Air Quality Monitor

Features:

- Multiple gas sensors (up to six)
- Temperature and humidity sensors
- Particulate monitor (PM2.5 or PM10)
- Wind speed and direction anemometer
- Noise and meteorological sensors
- Rapid real-time data sampling (2-minute)
- Wired or Wireless communication
- Large data storage capacity (>15 years)
- Thermal management system
- Weatherproof and compact enclosures
- Insulated roadside boxes, Metal enclosures, Mounting accessories are available

Specifications

Model	AQM60
Environment Operation Range	Standard: 50 to 77°F (10°C to 25°C) With Heater/Cooler: -4 to 113°F (-20°C to 45°C) 10 to 90 %RH (non condensing)
Communications Options	GSM modem / RF modem / Ethernet LAN
Other Sensor Options	Noise sensors / Particle counters / Meterological sensors
Power Supply	12VDC / AC power module 100 - 250 VAC
Enclosure	Standard: Fiber reinforced polycarbonate
Dimensions	H 23.6" x W 19.7" x D 9.1" (600 x 500 x 230 mm)
Weight	33 to 55 lb (15 to 25 kg), varies depending on configuration

Gas Sensor Specifications

Gas Sensor Heads	Sensor	Range (ppm)	Accuracy	Resolution	Power
Ozone	GSS	0 - 0.150	<+/- 0.005 ppm	0.001 ppm	2.9 W
Nitrogen dioxide	GSS	0 - 0.200	<+/- 15%	0.001 ppm	12.3 W
Carbon monoxide	GSS	0 - 100	<+/- 5 ppm	0.1 ppm	2.5 W
Sulphur dioxide	GSS	0 - 10	<+/- 0.5 ppm	0.01 ppm	2.5 W
Non-methane hydrocarbon	GSS	0 - 25	<+/- 0.5 ppm	0.1 ppm	2.5 W
VOC isobutylene	GSS	0 - 25	<+/- 10%	0.1 ppm	2.5 W
VOC isobutylene	PID	0 - 20	<10 %	0.01 ppm	1.5 W
Hydrogen sulphide	GSS	0 - 10	<+/- 0.5 ppm	0.01 ppm	2.5 W
Carbon dioxide	NDIR	0 - 2,000	<40 ppm + 3%	1 ppm	1.0 W

Fluidized Particle Generator

Kanomax Fluidized Particle Generators generate standard particles continuously for extended periods. Applications include pharmaceutical and chemical compound exposure research, and filtration performance testing.

Features:

- Available for variety of sample particles
- Long time operation
- Stably generated particle concentration
- Easy control on the concentration level

Model 3211

Model 3216

Specifications

Model	3211	3216
Particle Sizes	Less than 20 µm	0.2 to 10 µm
Density	100 mg/m³ to 1 g/m³	20 g/m³
Flow Rate	30 L/min	
Power Supply	AC100V, 50/60Hz	
Dimensions	W 6.7" x H 17.5" x D17.7"	W 20.1" x H 61.4" x D15.9"

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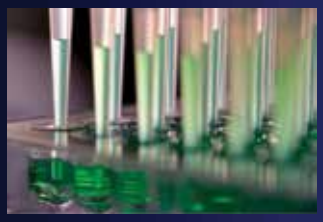
Applications

Food analysis


Forensic Science

Medical

Environmental analysis

Mass Spectrometry

INFITOF

Hi-Resolution & Compact TOF-MS

Time of Flight Mass Spectrometer

High performance and small foot print time of flight mass spectrometer by using multi-turn technology

Features:

- High resolution and compact time of flight mass spectrometer
- Impure substance analysis in gases with the detection limit of 10ppb
- Onsite detailed accurate analysis

Applications:

- Food analysis
- Particle analysis
- Environmental analysis
- Forensic: detection of forged paintings
- Medical: blood test, hair analysis etc

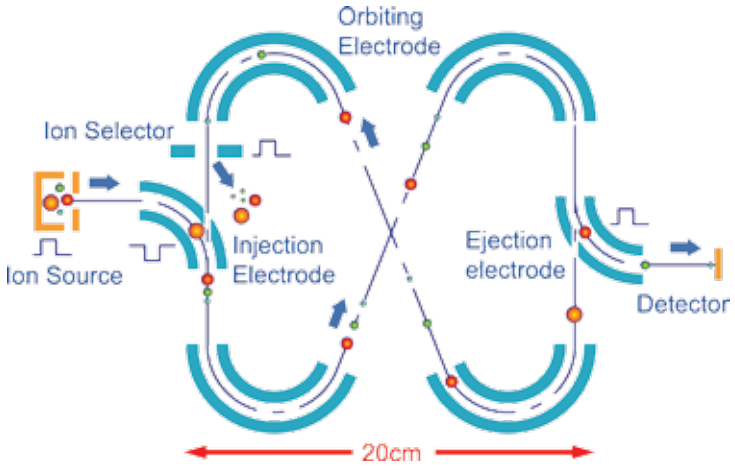
INFiTOF
Hi-Resolution & Compact TOF-MS

with Gas chromatography (optional)

Specifications	
Resolution	More than 30,000
Dynamic Range	10 bit
Sampling Flow Rate	2GS/s
Dimensions	H9.2" x W17.9" x D25.2"
Weight	79 lbs (36kg)

■ Key Technology "Multi-Turn Time of Flight Mass Spectrometry"

There are four orbiting electrodes and two injection/ ejection electrodes on a palm-sized optics bench. The ion source gives kinetic-energy for orbiting motion in the infinite loop. Injection and ejection electrodes are synchronized with ion source pulsing triggering. Injection electrode has to be in the on state while ions enter the analyzer, and then has to be turned off before first ion (smallest ion) returns to it. Orbiting electrodes are constant, so orbiting ion can be held until ejection electrode is ON.



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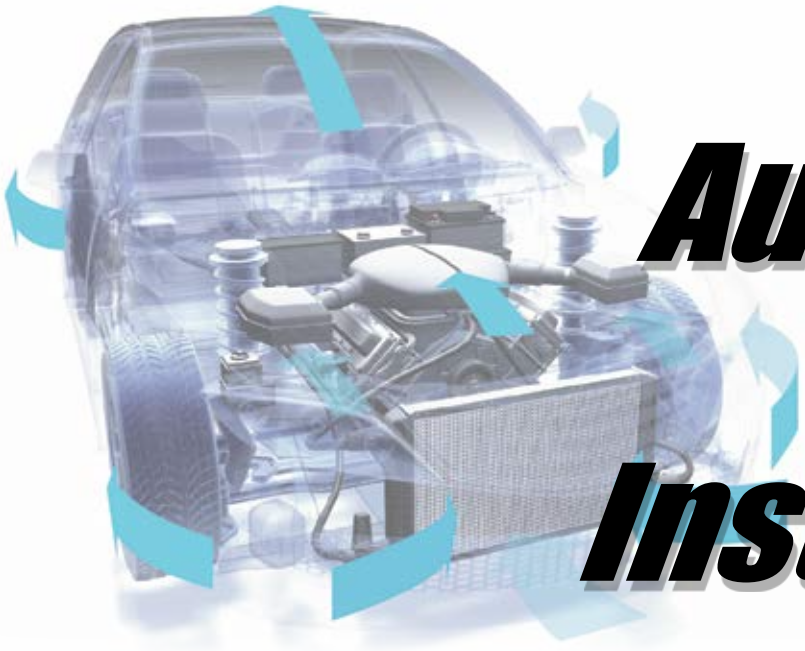


Automotive Testing Instruments

Amenity Manikin System

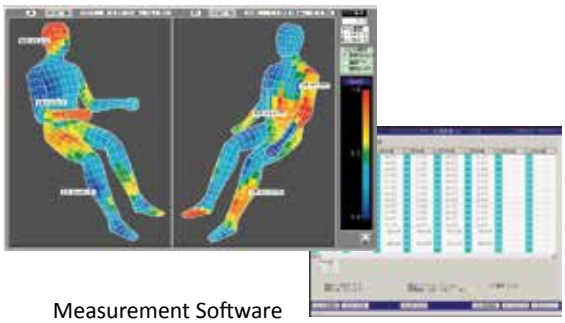
Cabin Comfort Test Rig

Kanomax Amenity Manikin System is a solution for precise interior cabin comfort evaluation. The system measures parameters; air velocity, temperature, humidity, and radiant heat; which relate to human comfort level. One mannequin equips more than 120 sensors all over its surface and provides sophisticated measurement.

Amenity Manikin

Features:

- 4 mannequins measure simultaneously; understanding the entire cabin
- Wireless connection brings easy operation
- Graphical software for both real-time measurement and data retrieval
- Excel compatible data output as well as saved graphical data for review



Measurement Software

Sensor Allocations by Part

	Air Velocity	Temperature	Humidity	Radiant Heat
Head	4	12	1	3
Torso	12	33	0	5
Lower Body	20	33	1	4
Total	36	78	2	12

Mannequin Specifications

Height	Approx. 5'6" (170 cm)
Weight	90 lbs (40 kg)
Material	Plastic (FRP)

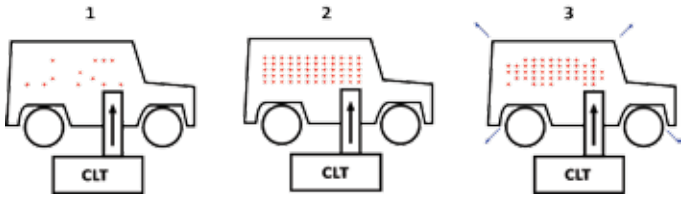
Sensor Specifications

Air Velocity Ranges	0.10 to 5.00 m/s
Accuracy	0.05 m/s
Temperature Ranges	30 to 100°C
Accuracy	+/- 3.0°C
Humidity Ranges	3 to 95% RH
Accuracy	+/- 3% RH
Radiant Heat Ranges	0 to kw/m²
Accuracy	+/- 7%
Wavelength	0.3 to 40 µm

Vehicle Cabin Leakage Testers

Cabin Comfort Test Rig

Leakage testing is performed by pressurizing or depressurizing the vehicle cabin. The tester measures the changes in cabin pressure. The control unit consists of a manometer and pressure transducers. The manometer detects the leakage flow, which is calculated by measuring the nozzle pressure relative to static pressure. The tester controls an adjustable fan to maintain static test pressure. Five selectable inlet nozzles provide reasonable leakage flow rate measurements of 2.5 to 800 cfm.



1. The cab is pressurized (either positively or negatively)
2. Pressure will be stable, normally stable conditions are achieved quickly
3. The leakage rate is measured

CLT-APC-NPP

CLT-MPC

Features:

- Automatic Pressure Control
- Negative Pressure Testing
- Features High Accuracy Manometer
- System includes inlet nozzles, certificate of conformance to ISO 5801: 1997, and pressure measurement calibration certificate

Specifications

Model	CLT-MPC	CLT-MPC-NPP	CLT-APC	CLT-APC-NPP
Fan Speed	847 cfm (400 L/sec)			
Pressure Measurement Accuracy	+/- 2 % of reading +/- 1 digit			
Leakage Flow Measurement Accuracy	+/- 3 % of reading +/- 1 digit Providing flow rate is varied by the nozzle * See nozzle specs			
Cabin Pressure Preset Ranges	–		0.2 to 2 in. H2O (5 to 499 Pa)	
Automatic Pressure Control	–		○	
Negative Pressure Plenum	–	○	–	○
Small Transport Cart	○	–		
Power Supply	120/240 V, 1 phase			
Duct Size	16.4 ft x 8 inches (5 m x 203 mm)			
Dimensions	Small Transport Cart: W 22.5" x H 23.5" x D 54" Large Transport Cart: W 27.5" x H 42" x D 58.5"			

Nozzle Specifications

Nozzle	Inlet Diameter	Flow Ranges
F	0.590" (15 mm)	2.5 to 10 cfm (1.2 to 4.8 l/s)
G	1.122" (28.5 mm)	8.5 to 36 cfm (4 to 17 l/s)
H	2.204" (56 mm)	32 to 142 cfm (15 to 67 l/s)
D	3.543" (90 mm)	53 to 296 cfm (25 to 140 l/s)
E	6.023" (153mm)	190 to 847 cfm (90 to 400 l/s)

Smoke Generator Model 8304

Smoke Generator for Air Flow Visualization

The Model 8304 is a smoke generator for wind tunnel testing and aerodynamics visualization. It produces vaporizing white smoke of 15 to 80L/min. Compressed air moves smoke to the comb-shaped nozzle and makes streamlines.

Nozzle

Features:

- Versatile and Portable unit
- High output, non-toxic, water-soluble smoke
- System cart, air compressor, and comb-shaped nozzle are available as options

Specifications

Model	8304
Smoke Output	15 to 80 L/min
Smoke Particle Size	0.3 to 1.0 µm
Warm Up Time	4 minutes
Power Supply	AC100V, 550W
Dimensions	W11.8" x H13.8" x D25.6"
Weight	61.7 lbs (28 kg)

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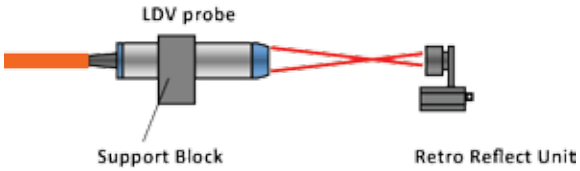
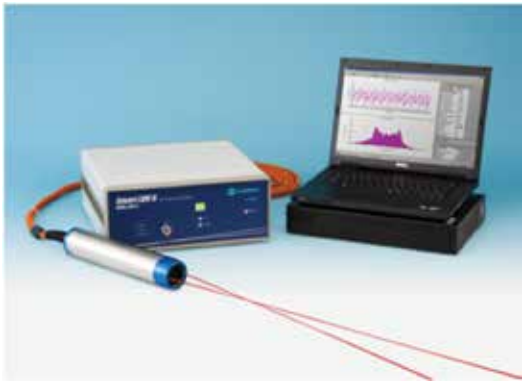
Fluid Mechanics Research Instruments

Smart LDV II

Compact LDV System

Two ion lasers from the fiber optic transceiver probe detect velocity measurement. Smart LDV System is an easy to use high quality LDV system.





Applications:

- Non-contact velocity measurements
- Wind tunnel studies
- Measurements in combustion, combustor

Features:

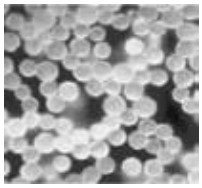
- Measure velocity of each bubble
- Applicable for non-conductive fluid
- Signal Processor is available for option
- Includes LDV probe with cable, Smart LDV driver, BNC-BNC cable, Interlock connecter, probe support block, power cable, and probe case

Specifications	
Model	**Smart LDV II**
Velocity Ranges	-40 to 100 m/s *Ask for above 100 m/s
Laser	Laser Diode: λ = 660 nm, Optical power: 60 mW
Focal Distance	150, 200, 250, 300, 350, 400mm
Focal Point Size	0.13 mm x 1.3 mm
Probe Size	Ø 61 mm x 312 mm
Shift Frequency	0.01 to 10 MHz (1-2-5 steps)
Signal Processing	8-bit FFT (512, 256, 128 points)
Max. Data Rate	16000 Data/sec

FLUOSTAR

Fluorescent Seeding Particles for PIV Applications

FLUOSTAR feature the outstanding emission efficiency of fluorescence, which are best suited for PIV applications. The strong orange-colored fluorescence may be even observed by sight using a 5 mW laser pointer.



Applications:

- Single-phase liquid flows
- Multi-phase flows
- Industrial large-scale flows
- Near-wall flows
- Stereo PIV

Features:

- Moderate size dispersity
- Uniform spherical shape
- Minimal photobleaching
- Minimal dye leaking
- No swelling or shrinking

Specifications	
Substrate Material	Carboxy-modified acrylate resin
Refractive Index	1.560 (polymer)
Temperature	Resistant up to 100 Celsius (polymer)
Fluorescence dye	Rhodamine B (Excitation 550 nm / Emission 580 nm)
Density	1.1 g/cm^3
Size Uniformity	15 µm (Uniform spherical shape) Less than 20% C.V.
Sizes	1, 5, and 10g

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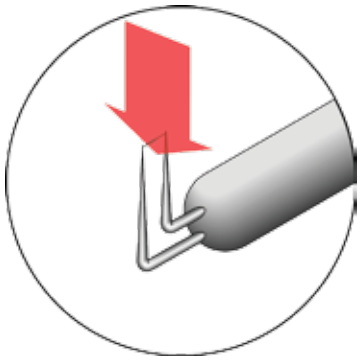
Intelligent Hot Wire Anemometer Model IHW-100

The air velocity sensor is heated and temperature elevated (relative to the surrounding air) by means of control electronics. The circuit forces the voltage to be equal by means of an operational amplifier. Air flowing past the sensor tends to cool the sensor, thus driving down its resistance. The amplifier responds by immediately delivering more power to the circuit to maintain voltage equilibrium. Delivered power is converted into electrical signals to display.



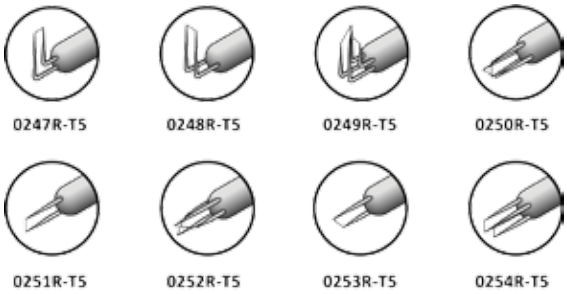
Features:

- Highly responsive 2-channel flow measurement
- Software-controlled probe calibration, measurement, analysis, and display
- Variety of probes to meet individual measuring needs
- Automatic probe resistance measurement and setup by the built-in CPU
- Up to 4 units connected for 8 channels

Specifications

Model	IHW-100
Composition	CTA, TEMP, CPU
Bridge Ratio	Approx. 10:1
Probe Current	Up to 500 mA
Frequency Response	10kHz at air velocity 9,840 fpm (50 m/s)
Temperature Compensation	32 to 122°F (0 to 50°C) with a copper-constantan thermocouple
Power Supply	AC 90 to 250V
Dimensions	W 16.9" x H 3.9" x D 11.8"(430 x 99 x 300 mm)
Weight	13.2 lbs (6 kg)

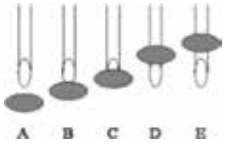
■ Option Probes

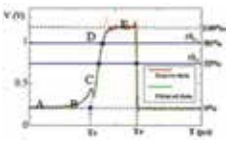


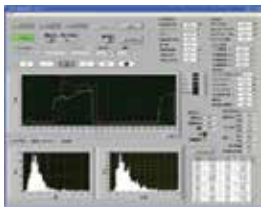
BubbleMaster

Void Fraction Measuring System

Bubble Master detects the change of reflection when a bubble passes through the tip of fiber optics sensor. System determines bubble size and its velocity from the passing time and the changing of reflection light.







Software Included

Features:

- Measure bubble size and velocity of each bubble
- Applicable for non-conductive fluid

Applications:

- Cavitation Research
- Nuclear reactor coolants
- Gaseous diffusion research

Specifications

Model	BubbleMaster
Sensor Type	S-TOP: Single tip optical fiber T-TOP: 2 tips optical fiber F-TOP: 4 tips optical fiber
Applicable Bubble Size	From 1.0mm
Applicable Velocity	Up to 5.0 m/s

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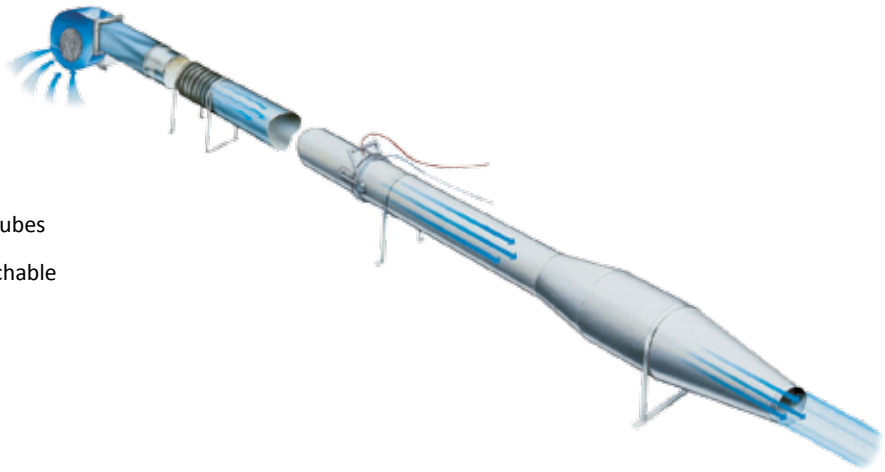
Open Jet Wind Tunnel

For airflow measuring instrument calibration

The general arrangement of the Open Jet Wind Tunnel covers a velocity range of 0.3 to 30 m/s and is designed for bench mounting.



Applications:

- Verification and calibration of anemometers and pitot tubes
- Capture hood calibration can be done with the detachable plenum chamber (option)
- NIST traceability
- Research and development

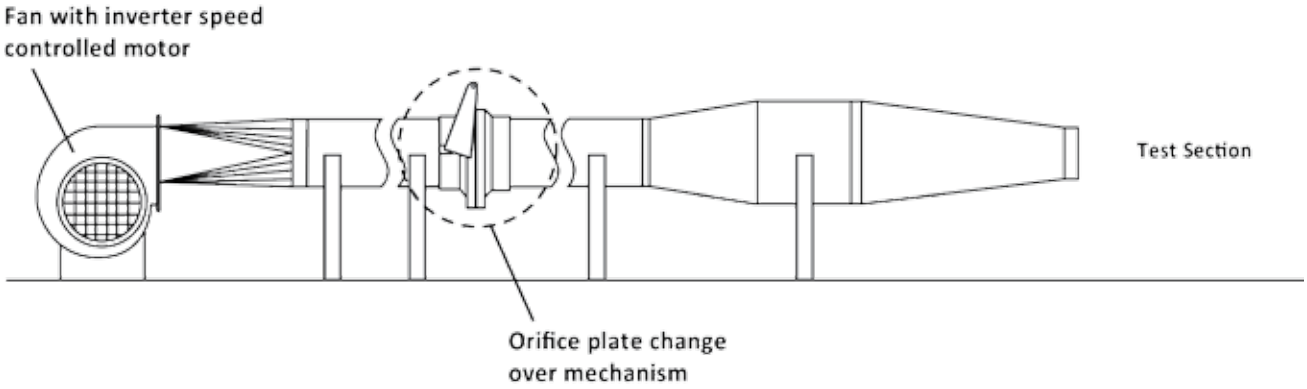
Specifications	
Type	Open Jet
Velocity Range	0.3 to 30 m/s
Air Temperature	Ambient
Power Supply	Single phase 220-240 V 50/60 Hz *Other Voltages can be supplied to suit country requirements
Dimensions	Length: 5500 mm (basic setup)

Wind Tunnel setup at Kanomax calibration lab

■ Schematic of the wind tunnel

The wind tunnel fan delivers air into a 200mm diameter tube containing piezometric flanges for the orifice plates forming a quick changeover orifice plate measurement device. Four orifice plates are supplied to cover the full velocity range settings.

Following the orifice plate device is an expansion chamber with perforated screens to provide an even air flow through a final contraction section. Terminating at a sharp edged exit nozzle to Atmosphere, the Air Jet is delivered at test velocity.



Closed Circuit Wind Tunnel

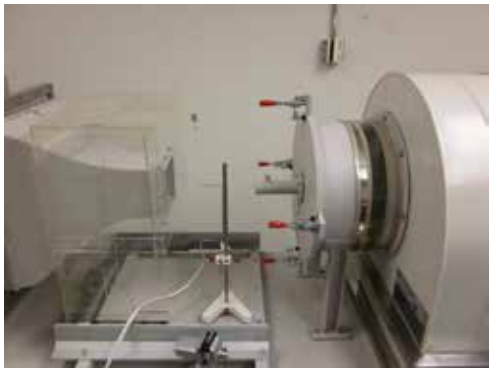
For airflow measuring instrument calibration

The Kanomax wind tunnel is designed for the calibration of anemometers and pitot static tubes. The wind tunnel has a velocity range of 0.5 to 50 m/s (98 to 9842 ft/min) and can also be used for small scale aerodynamic experiments.

Applications:

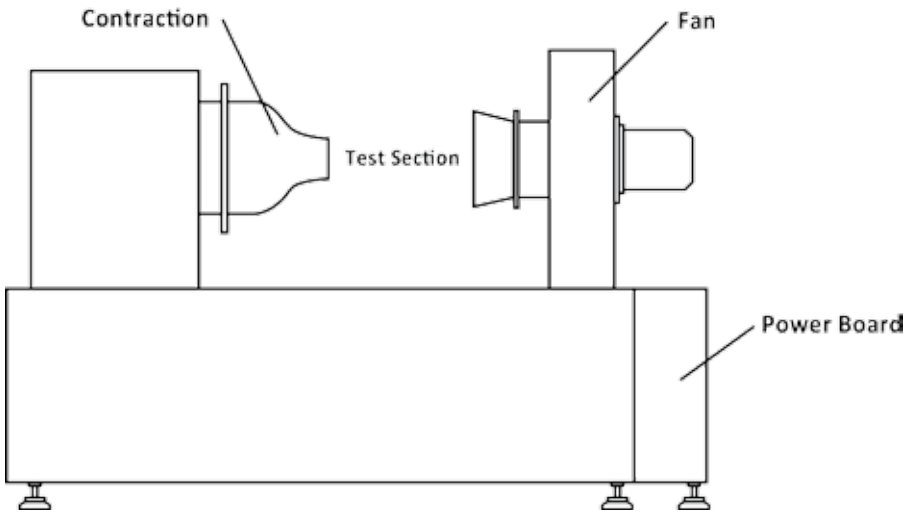
- Verification and calibration of anemometers and pitot tubes
- NIST traceability
- Research and development

Specifications	
Type	Gottingen (closed circuit)
Velocity Range	0.5 to 50 m/s
Air Temperature	Ambient
Cross Section	150 x 150 mm
Power Supply	Tri-phase 380V 50Hz 6KVA
Dimensions	W3000 x H1600 x D1000 mm



Test Section

■ Schematic of the wind tunnel



*Kanomax offers other wind tunnel solutions. Please contact us.

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All specifications subject to change without prior notice

KANOMAX
The Ultimate Measurements

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